



Latitude:46.82334, Longitude:-100.83035

Route:00094 Log:156.576

District 61, Morton County

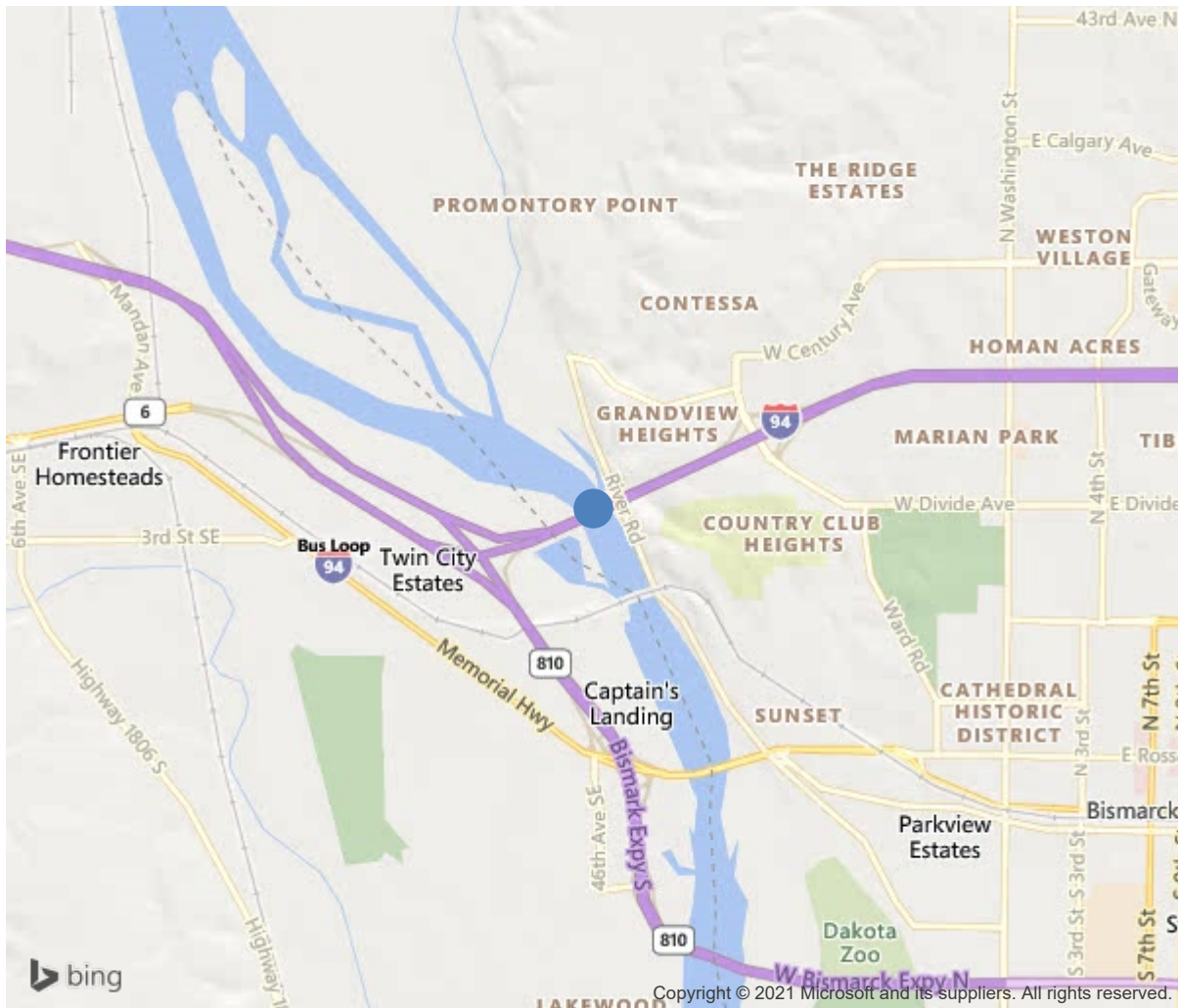
Owner: 1-State Highway Agency

Place Code: BISMARCK CITY

Team Leader: Jake Mertz

Approved By: Travis McCloud

3 WEST OF US 83 NORTH



46.82334, -100.83035



IDENTIFICATION	
(1) State Names	North Dakota
(8) Structure Number	0094-156.609
(5) Inventory Route	00094
(2) Highway Agency District	61
(3) County Code	Morton, North Dakota
(4) Place Code	7200
(6) Features Intersected	MISSOURI RIVER
(7) Facility Carried	INTERSTATE 94
(9) Location	3 WEST OF US 83 NORTH
(11) Mile Point	156.576 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte	0000000000
(16) Latitude	46.82334
(17) Longitude	-100.83035
GPS X	360420.1
GPS Y	5187158
(98) Border Bridge State Code	-1
(99) Border Bridge Struct. No.	-
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4-Steel continuous
Type	2-Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	7
(46) No. of Approach Spans	0
Culvert	
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	4-Low slump Concrete
Type of Membrane	0-None
Type of Deck Protection	0-None
Deck overburden	1
AGE AND SERVICE	
(27) Year Built	1965
(106) Year Reconstructed	2002
(42) Type of Service	16
On	1-Highway
Under	6-Highway-waterway
(28) Lane	
On	4
Under	2
(29) Average Daily Traffic	24125
(30) Year of ADT	2019
(109) Truck ADT	9 %
(19) Bypass, Detour Length	3 mi
(114) Future ADT	34605
(115) Year of Future ADT	2039
GEOMETRIC DATA	
(48) Length of Maximum Span	232.9 ft
(49) Structure Length	1125 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	60 ft
(52) Deck Width Out to Out	72.2 ft
(32) Approach Roadway Width (W/Shoulders)	74.1 ft
(33) Bridge Median	3-Closed median with non -mo
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	29.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	28.74 ft
Ref:	
(55) Min Lat Underclear RT	9.8 ft
Ref:	
(56) Min Lat Underclear LT	0 ft

CLASSIFICATION	
(A-7) Agency Admin Area	1
(112) NBIS Bridge Length	Y
(104) Highway System	NHS
(26) Functional Class	11-Urban Principal Arterial - Int
(100) Defense Highway	1-The inventory route is on a In
(A16) TE Route	
(101) Parallel Structure	N-No parallel structure exists.
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0-N/A
(110) Designated National Network	1-The inventory route is part of the
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	5-Bridge is not eligible for the NRP
CONDITION	
(58) Deck	6
(59) Superstructure	6
(60) Substructure	5
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5-MS 18 / HS 20
(63) Operating Rating Method	2
(64) Operating Rating	72.4
(65) Inventory Rating Method	2-Allowable Stress(AS)
(66) Inventory Rating	38.7
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	7
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	6
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(36) Traffic Safety Features	1111
A) Bridge Railings	1-Inspected feature meets currently a
B) Transitions	1-Inspected feature meets currently a
C) Approach Guardrail	1-Inspected feature meets currently a
D) Approach Guardrail Ends	1-Inspected feature meets currently a
(113) Scour Critical Bridges	8-Bridge foundations determined to be
APPROVED INSPECTIONS	
(90) Inspection Date	08/2020
(91) Frequency	24 Months
(92) Critical Feature Inspection	Req Freq. (Mon) Date
A: Fracture Critical Detail	Yes 24 08/2020
B: Underwater Inspection	Yes 60 07/2018
C: Other Special Inspection	No
NAVIGATION DATA	
(38) Navigation Control	1-Navigation control on waterway
(111) Pier Protection	1-Navigation protection not requ
(39) Navigation Vertical Clearance	27.9 ft
(116) Vert-Lift Bridge Nav Min Vert Clr	ft
(40) Navigation Horizontal Clearance	210 ft
AGENCY ITEMS	
(A-21) Fedaid Project no.	IR-094-4(48)156
(A-14) Chaining Date	2018
(A-15) Delamination Pct	
(A-2) Rating Date	1/1/1901 12:00:00 AM
Bridge Health Index	98.53

Inspection Team Lead: Jake Mertz

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[illegible]



ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>The following areas are where corrosion was located: The Westbound lanes, girder 2, span 1. The South web is missing and anti-climbing plate that has become detached.; The Westbound lanes, span 6, girder 1 lower flange splice plate has pack rust.; The Westbound lanes, span 5, diaphragm 9, above the North bearing has corrosion below the L1 connection.; The Westbound lanes, span 5, diaphragm 9, below the L4 connection.; The Westbound lanes, span 5, girder 2, between diaphragms 8 and 9 has rust on the North side of the lower flange.; The eastbound lanes, girder 1, span 7, the anti-climbing has become detached from the North web.; The Westbound lanes, span 4, girder 2, the South flange has corrosion to the West of the field splice.; The Westbound lanes, span 6, diaphragm 1 has loss of coating and corrosion at the U1 connection.; The Westbound lanes, span 5, the vertical stiffener to the West of diaphragm 9 has corrosion.; The Westbound lanes, span 2, pier 2 at diaphragm 1. The L1 connection has rusting around bolt heads.; The Westbound lanes, span 2, diaphragm 1 at pier 2. The L1 connection below the gusset plate is rusting.; The Westbound lanes, span 3, girder 1 splice between diaphragms 8 and 9 is corroded.; The Westbound lanes, span 3, girder 1 has section loss on the lower North flange between diaphragms 8 and 9. Original thickness was 1.56 inches, measured thickness is 1.39 inches.; The Westbound lanes, span 1, diaphragm 5. The U4 connection is heavily corroded on the East face.; The Westbound lanes, span 2, girder 2 web has corroded completely through.; The Westbound lanes, span 2, girder 2 has corrosion with section loss on the bottom of the lower flange.; The Eastbound lanes, span 1, girder 1 at diaphragm 5. The lower flange and stiffener in this area have corrosion with section loss.; The Eastbound lanes, span 2, girder 1 web and lower flange have corrosion with section loss.; The Eastbound lanes, span 2, girder 2 on the South face of the web at the lower flange has section loss approximately 8 inches by 2.5 inches 3 feet West of diaphragm 2.; The Eastbound lanes, span 2, girder 2 at pier 3 has section loss on web above the longitudinal stiffener.; The Eastbound lanes, span 3, girder 2 at pier 3 has section loss on web above the longitudinal stiffener.; The Eastbound lanes, span 3, girder 2 approximately 8 feet to the West of the East field splice. The lower flange and web have section loss.; The Eastbound lanes, span 3, girder 2 East splice plate has pack rust pushing the web splice plate out approximately 0.75 inches.; The Eastbound lanes, span 4, East field splice has corrosion at the bottom of the web splice plate pushing it out approximately 0.5 inches.; The Eastbound lanes, span 5, girder 2 at pier 6 has approximately 12 feet of section loss and corrosion where the web meets the lower flange.; The Eastbound lanes, span 6, girder 1, 1.5 feet East of diaphragm 5. The lower field splice plate has pack rust.; The Eastbound lanes, span 6, girder 2 lower splice plate has heavy pack rust on the South face.; The Eastbound lanes, girder 2 below the expansion joint at pier 2 has a hole due to corrosion. 11August2020</p> <p>(107-1010)</p> <p>The Eastbound lanes, span 1, girder 1 web is cracked approximately 6 inches in length over the bearing. The .030 inch gauge was the thickest gauge able to be inserted into the crack. The coating was removed and the crack was marked for monitoring. 17August2020</p> <p>(107-1900)</p> <p>span 1 girder1 bottom flange distortion - 5/13/2019</p> <p>The following items are displaying distortion: The Westbound lanes, span 2, girder 1 diaphragm, below the L1 gusset plate. The transverse stiffener is distorted 3/4 inch in 9 inches.. This gusset plate is also distorted 1/4 inch in 2 feet.; The Westbound lanes, girder 1, span 1 at pier 2 has flange and web distortion.; The Eastbound lanes, span 1, girder 2 north flange is bent downward approximately 2 inches.; The Eastbound lanes, span 1, girder 2. The South flange is distorted upwards 2.25 inches . This is located to the West of diaphragm 5.; The Eastbound lanes, span 1, girder 2, approximately 2 feet West of diaphragm 5 has distorted inward approximately 1.75 inches.; The Eastbound lanes, span 3, girder 2. The transverse stiffener between L4 and U4 is bent to the East approximately 1/8th inch in 2 feet. The transverse stiffener at the U4 connection is bent to the West approximately 1/8th inch.; The Eastbound lanes, span 3, girder 2 in plane with diaphragm 8, approximately 3.3 feet down from the top flange is bent inward 5/8ths of an inch.; The Eastbound lanes, span 3, girder 2, approximately 8 feet from the field splice is deflected inward approximately 5/8ths of an inch. The size of this area is approximately 1 foot by 1 foot.; The Eastbound lanes, span 4, girder 2, the transverse stiffener below the gusset plate at diaphragm 9 is bent to the East.; The Eastbound lanes, span 6, girder 2 lower flange splice plate has pack rust. The original thickness measures 1.43 inches. The pack rust has a thickness of 2.68 inches. 24August2020</p> <p>(107-515-3420)</p> <p>paint peeling taking place in some spots - 5/13/2019</p> <p>8/12/2020 - Peeling of Coating to Bottom Flange of WB I-94 Girder 1 in Span 4 Near Diaphragm 4. Primer In Tact. See Photo.</p>							
113	Steel Stringer	LF	4488	4464	5	15	4
1000	Corrosion	LF	16	0	0	12	4
1020	Connection	LF	3	0	0	3	0
1900	Distortion	LF	5	0	5	0	0

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
515	Steel Protective Coating	SF	24519	24518	1	0	0
3420	Peeling/Bubbling/Cracking	SF	1	0	1	0	0
(113-1000)							
The following areas are where corrosion was located: Span 5, stringer 2 lower flange at diaphragm 9 above the U3 connection had an original thickness of 0.69 inch. The corroded area has a thickness of 0.48 inch. The web of this stringer has corroded through where the stringer is bolted to the diaphragm. Same span and diaphragm location above the U2 connection has heavy corrosion on the web of the stringer.; The Eastbound lanes, span 5, stringer 2, 6 feet West of diaphragm 9, the bottom web of the stringer has section loss on the North face.; The Westbound lanes, span 1, stringer 2 above pier 2 on the lower flange original thickness is 0.59 inch, measured thickness is 0.19 inch.; The Eastbound lanes, span 1, stringer 1 above the U2 connection at diaphragm 5. Original thickness was 0.63 inch, measured thickness is 0.29 inch.; The Eastbound lanes, span 1, stringer 2 above the U3 connection on diaphragm 5. Original thickness 0.62 inch, measured thickness is 0.41 inch.; The Eastbound lanes, span 2, diaphragm 1 above the U3 connection. The web of the stringer has corroded through approximately 7 inches in length.; The Eastbound lanes, span 6, stringer 2 above the U3 connection, the web of the stringer has corroded through approximately 6 inches in length and 1 inch in height.; 20August2020							
(113-1020)							
some pack rust present - 5/13/2019							
The following areas are where defects were located: Span 5, diaphragm 5, stringer 2 at the U3 connection has a broken bolt.; The Eastbound lanes, span 1, diaphragm 5, stringer 1 web repair.; The Eastbound lanes, span 2, diaphragm 1, stringer 2 at the U3 connection is missing a bolt. 17August2020							
(113-1900)							
The following areas are where deformation was located on the stringers: The Westbound lanes, span 7, stringer 2 approximately 4 feet to the East of diaphragm 2 the splice plates on the lower flange are deformed.; The Westbound lanes, span 5, stringer 1 diaphragm 6 next to the U2 connection. The bottom flange is bent 3/8ths of an inch upward.; The Westbound lanes, span 4, stringer 1 approximately 6 feet to the East of diaphragm 4 is bent upward 1/4th of an inch.; The Westbound lanes, span 2, stringer 1 between diaphragms 4 and 5 the lower flange is bent upward.; The Westbound lanes, span 2, stringer 1 between diaphragms 3 and 4 the lower flange is bent upward in 2 areas.; 13August2020							
(113-515-3420)							
paint bubbling in some areas - 5/13/2019							
152	Steel Floor Beam	LF	2274	2223	11	30	10
1000	Corrosion	LF	50	0	10	30	10
1900	Distortion	LF	1	0	1	0	0
515	Steel Protective Coating	SF	27709	27698	3	0	8
3420	Peeling/Bubbling/Cracking	SF	11	0	3	0	8
(152-1000)							
corrosion taking place at const joints - 5/13/2019							
The following areas are where corrosion was located: The Westbound lanes, span 5, diaphragm 9 at the L1 connection. The flange has section loss original measurement is .61 inch and current measurement is .41 inch.; The Westbound lanes, span 6, diaphragm 1 at the L3 connection has section loss.; The Westbound lanes, span 5, diaphragm 9 at the L4 connection. The bottom flange has section loss originally measured at .58 inch, current measurement is .36 inch.; The Westbound lanes, span 5, diaphragm 9 upper chord at the U2 connection has section loss. original measurement is .49 inch, current measurement is .13 inch.; The Westbound lanes, span 5, diaphragm 9 above the U3 connection lower flange section loss.; The Westbound lanes, span 2, diaphragm 1 at the L1 gusset plate has corrosion.; The Westbound lanes, span 1, diaphragm 5 bolt heads rusting and section loss.; The Westbound lanes, span 1, diaphragm 5, U1 to U2 upper chord with rust on top flange.; The Westbound lanes, span 2, diaphragm 5 upper chord next to U1 connection on the lower flange. There is approximately .75 inch of flaking coating and metal.; The Westbound lanes,							

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
span 2, diaphragm 1 at the U3 connection. The web has corroded completely through.; The Westbound lanes, span 6, diaphragm 1at the U4 connection has rust along the bottom flange.; The Westbound lanes, span 1, diaphragm 1, upper chord from U3 to U4 connections on the West side of the web.; The Eastbound lanes, span 1, diaphragm 5, U1 to U2 bottom flange thickness is .48 inch. The top flange measured .15 inch.; The Eastbound lanes, span 2. There is a hole in the non-fracture critical member at the U3 connection of diaphragm 1.; The Eastbound lanes, span 6, diaphragm 1 at the L4 connection. There is corrosion approximately 2 feet in length. 24August2020							
(152-1900)							
The following areas are where distortion was located: The Westbound lanes, span 5, diaphragm 8 between L3 and L4 connections approximately 2 feet to the North of the L3 connection.; The Eastbound lanes, span 5, diaphragm 3 upper chord member between U2 and U3 connections bent downward 3/8ths of an inch in 8 inches. 20August2020							
(152-515-3420)							
paint peeling at const joint and other various spots on floor beams - 5/13/2019							
no change to previous entry. 13August2020							
205	Reinforced Concrete Column	EA	15	13	2	0	0
1130	Cracking (RC and Other)	EA	9	7	2	0	0
(205-1130)							
some cracking visible on cloums - 5/13/2019 8/10/2020 - Minor Vertical cracking to Column 3 at Pier 2. Width 0.012. See Photo. 8/11/2020 - Minor Vertical Cracking to Column 1 at Pier 5 with widths 0.020. Minor Vertical Cracking to Column 2 at Pier 5 with width of 0.008 along East face and up to 0.020 at West Face. Vertical cracking to Column 1 at Pier 6 with widths ranging from 0.020 to 0.025. Column 1 at Pier 6 also observing abrasion. Minor vertical cracking to Columns 2 and 3 at Pier 6 with widths 0.025. Minor Vertical cracking to Column 1 at Pier 7 with width of 0.014, Column 2 at Pier 7 with width 0.006, and Column 3 with a width of 0.010. See Various Photos.							
210	Reinforced Concrete Pier Wall	LF	138	129	9	0	0
1130	Cracking (RC and Other)	LF	9	0	9	0	0
(210-1130)							
pier walls have vertical cracking and some diagonal cracking - 5/13/2019 8/11/2020 - Pier 5 Wall with Vertical Cracking. 3 LF in-between WB Girders 1 and 2 with a width of 0.040, 1 LF in-between WB Girder 2 and EB Girder 1 with a width 0.014, 5 LF in-between EB Girders 1 and 2 with widths 0.020. See photos.							
215	Reinforced Concrete Abutment	LF	138	106	25	7	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1130	Cracking (RC and Other)	LF	36	5	25	6	0
(215-1080)							
8/10/2020 - Spalling near SE corner where it meets the wing. Area is 1' x 5' x 3" Deep. See photo.							
(215-1130)							
both abutments have cracks in them - 5/13/2019 8/10/2029 - Various cracking to East Abutment on WB I-94 bridge seat pedestals 1 - 2 and EB I-94 pedestals 1 - 2. WB Pedestal 1 at East Abutment with 2 LF CS 2 cracking with widths 0.040 to 0.050. WB Pedestal 1 and East Abutment with 1 LF of CS 3 cracking with width 0.060 on the North Side. WB Pedestal 2 at East Abutment with 1 LF on CS 2 Cracking with a width of 0.050. EB Pedestal 1 at East Abutment with 2 LF of CS 2 Cracking with widths 0.040. EB Pedestal 2 at East Abutment with 3 LF of CS 3 Cracking with widths 0.060. See photos. Vertical cracking to East Abutment Backwall. CS 1 cracking north of WB Girder 1 with 2 LF of diagonal and 1 LF of vertical. 1 LF of							



ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
vertical cracking South of WB Girder 2. CS 1 width of 0.010 to 0.012. See photos. CS 2 vertical cracking at East Abutment with 2 LF Approx. 2' south of WB Girder 1 with width 0.025, 1 LF Approx. 10' South of WB Girder 1 with width 0.030, 1 LF approx 6' North of WB Girder 2 with width of 0.030, 1 LF in-between WB Girder 2 and EB Girder 1 with a width 0.028, 1 LF Approx 10' South of EB Girder 1 with Width 0.030, 1 LF Approx 10' South of EB Girder 1 with a width 0.016, 4 LF in-between EB Girders 1 and 2 with width 0.016 to 0.020 spaced approximately 5'. See Various photos. Various Cracking to West Abutment on WB I-94 bridge seat pedestals 1 and EB pedestal 2. WB Pedestal 1 with 2 LF of CS 3 Cracking with width of 0.060. EB Pedestal 2 with 2 LF of CS 2 Cracking with widths 0.030. See Photos. Vertical Cracking to West Abutment Backwall with 1 LF at WB Girder 1, Width 0.030, 3 LF in-between WB Girders 1 and 2 varying from 0.016 to 0.025 widths, 1 LF in-between WB Girders 2 and EB Girder 1 with widths 0.025, 2 LF in-between EB Girders 1 and 2 with widths varying 0.018 to 0.025.							
234	Reinforced Concrete Pier Cap	LF	200	0	67	133	0
1130	Cracking (RC and Other)	LF	200	0	67	133	0
(234-1130)  cracking on all pier cap more heavy cracking on south side of the caps - 5/13/2019  Piers 2 and 6 have the heaviest amount of map cracking due to this is the locations of the expansion joints. All the pier caps have map cracking on the ends of the caps. 20August2020							
301	Pourable Joint Seal	LF	4800	4440	0	0	360
2330	Seal Damage	LF	360	0	0	0	360
(301)  8/10/2020 to 8/11/2020 - 300 LF of pourable joint for bridge ends and approach panels. 4,500 LF for longitudinal pourable joint at deck extensions.  (301-2330)  8/10/2020 - WB Bridge end and approach panel joints on both ends with complete seal damage causing debris to filter in. Some areas of the Joint filled over with HMA. See photos. 8/14/2020 - EB Bridge end and approach panel joints on both ends with majority to complete seal damage causing debris to filter in. Some areas filled with Patch Material of HMA. See Photos.							
304	Open Expansion Joint	LF	141	39	29	61	12
2350	Debris Impaction	LF	41	0	29	0	12
2360	Adjacent Deck or Header	LF	56	0	0	56	0
7000	Damage	LF	5	0	0	5	0
(304-2350)  8/11/2020 - CS 4 Debris Impaction Build up to WB I-94 Pier 2 Expansion Joint with 2 LF on WB driving lane shoulder and 3 LF on WB passing lane shoulder completely filled to the top of the joint. See photos. CS 2 Debris Impaction build up on WB I-94 Pier 2 Expansion Joint with 13 LF in WB driving/passing lanes/shoulders and on Pier 6 Expansion Joint with 16 LF in WB passing lane and both shoulders. See photos. 8/14/2020 - CS 4 Debris Impaction Buildup to EB I-94 Pier 2 Expansion Joint with 3 LF in the EB DL Shoulder and 1 LF in the EB PL Shoulder. CS 4 Debris Impaction buildup to EB I-94 Pier 6 Expansion Joint with 2 LF on the EB DL Shoulder and 1 LF on the EB PL Shoulder. See Photos.  (304-2360)  joint rattles sum but in working order - 5/13/2019 8/11/2020 - CS 3 patched area is spalling out on EB I-94 Pier 2 Expansion Joint with and area of 1.5' x 10' in WB driving lane and 1' x 4' in WB passing lane. CS 3 patched area is spalling out on EB I-94 Pier 6 Expansion Joint with 1' x 11' in WB driving lane. See photos. 8/14/2020 - Patched area to EB I-94 Pier 2 Expansion Joint with areas of 1' x 6.5', 1' x 4' to 9' Width in the EB DL. Spalling along							

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>Expansion Joint Header with and area of 1' x 2' in the EB DL. See Photos.  Patched area to EB I-94 Pier 6 Expansion Joint with areas of 1' x 7' on EB DL and 1' x 12' on the EB PL. Spalling along Expansion Joint Header with and area of 1' x 3' in the EB DL. See photos.</p> <p>(304-7000)</p> <p>8/11/2020 - CS 3 finger joint damage of 3 LF to top half of finger at WB I-94 Pier 2 Expansion Joint in WB driving/passing lane and 2 LF to top half of finger on Pier 6 Expansion Joint in WB driving lane. See photos.</p>							
305	Assembly Joint without Seal	LF	60	0	0	0	60
2350	Debris Impaction	LF	60	0	0	0	60
<p>(305-2350)</p> <p>8/14/2020 - Debris Impaction to PCC Pavement with Patched areas effecting the joint movement at EB and WB I-94 East Outer Approach Panels to PCC Pavement. See Photos.</p>							
311	Movable Bearing	EA	28	0	28	0	0
1000	Corrosion	EA	28	0	28	0	0
515	Steel Protective Coating	SF	800	600	0	80	120
3440	Effectiveness (Steel Protective Coatings)	SF	200	0	0	80	120
<p>(311-1000)</p> <p>pack rust present - 5/13/2019  8/12/2020 - Rusting Mainly along Baseplates of Bearings 1 and 2 under Girders 1 and 2 of EB and WB I-94 at Piers 2, 3, 5, 6, and 7. See Various Photos.</p> <p>(311-515)</p> <p>Pier 2, 6 ,and 7 Moveable Bearings - 20 SF / Bearing  Pier 3 and 5 Moveable Bearings - 50 SF / Bearings</p> <p>(311-515-3440)</p> <p>some peeling of paint present - 5/13/2019  8/12/2020 - Areas of Limited Effectiveness to Bearings at Piers 2, 3, 5, 6, and 7. 10% Estimated. Areas of no effectiveness mainly along baseplates. Estimated 15%. See Photos.</p>							
313	Fixed Bearing	EA	12	0	11	1	0
1000	Corrosion	EA	11	0	11	0	0
1020	Connection	EA	1	0	0	1	0
515	Steel Protective Coating	SF	80	64	0	8	8
3440	Effectiveness (Steel Protective Coatings)	SF	16	0	0	8	8
<p>(313-1000)</p> <p>pack rust visible - 5/13/2019  8/10/2020 - East bearings rusting mainly along baseplate with pack rust visible underneath plate. See photos. West Abutment Bearing rusting along baseplates of EB and WB I-94 Bearings 1 and 2 with minor pack rusting under baseplate. See Photos.  8/12/2020 - Rusting mainly along baseplates at Pier 4 EB and WB Bearings 1 and 2. See Photos. No Pack Rust Observed.</p> <p>(313-1020)</p> <p>8/10/2020 - EB I-94 Bearing 1 at West Abutment with missing/sheared off Swedge bolt and Nut on North Side. See Photo.</p>							

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(313-515)							
8/13/2020 - Fixed Bearings Calculated at 10 SF EA for West and East Abutment and 50 F EA for Pier 4.							
(313-515-3440)							
some bubbling of paint visible - 5/13/2019							
8/10/2020 - Limited Effectiveness of coating to primers at East Abutment. Estimated 10% for each bearing. See photos. Limited to Loss of effectiveness to coating to Bearings 1 and 2 for EB and WB I-94 at West Abutment. Estimated 10% for Each Bearing for CS 3 and 5% for CS 4. See photos.							
8/12/2020 - Limited effectiveness of coating to Pier 4 Bearings above the Baseplate. Estimated 10%. Loss of effectiveness to coating along Pier 4 Bearing Baseplates. Estimated 10%. See photos.							
321	Reinforced Concrete Approach Slab	SF	5280	5026	51	203	0
1080	Delamination/Spall/Patched Area	SF	224	0	21	203	0
1130	Cracking (RC and Other)	SF	46	16	30	0	0
(321-1080)							
8/10/2020 - CS 2 patched spalling on East approach slab of 9' x 2' in WB lane along centerline and on West approach slab of 1' x 2' in WB passing lane at edge line, and 1' x 1' in WB passing lane on edge line. See photos.							
CS 3 spalling on East approach slab of 1' x 3' in WB passing lane near centerline, 3' x 2' in WB driving lane near edge line, and a 3' x 1' in WB driving lane along joint between slabs at edge line. See photos.							
CS 3 spalling on West approach slab of 1' x 4' x 1.5 inch deep in WB driving lane from edge line going South, 1' x 1' in WB passing lane on centerline, 2' x 12' in WB driving lane between approach slabs, 2' x 1' and a 1' x 2' in WB passing lane on centerline between approach slabs, 1' x 16' in WB passing lane on edge line. See photos							
8/14/2020 - CS 3 spalling in EB driving lane on East Approach slab of 2' x 12' on joint between approach slabs, a 1.5' x 6' on edge line, 10' x 1' on centerline, 2' x 5' at centerline on East end of bridge, and a 1' x 7' on East end of bridge from edge line to center of lane. See photos.							
CS 3 spalling in EB passing lane on East Approach slab of 2' x 2' on edge line. See photos.							
CS 3 spalling in EB driving lane on outer East Approach slab of 1.5' x 5' on edge line. See photo.							
CS 3 spalling in EB passing lane on outer East Approach slab of 1' x 3' on edge line, 3' x 1' on edge line and 6' x 1 on edge line. See photos.							
CS 3 spalling in EB driving/passing lane on West Approach slab of 1' x 13' on West end bridge joint with 5' North of and 8' South of centerline.							
CS 3 spalling in EB driving lane on West Approach slab of 1' x 40' along edge line on both approach slabs. See photo.							
CS 3 spalling in EB passing lane on West Approach slab of 1' x 1' at centerline between approach slabs and 4' x 1' on edge line of outer approach slab. See photos.							
(321-1130)							
cracking is visible in all approach slabs - 5/13/2019							
8/10/2020 - Minor CS 1 transverse cracking to WB I-94 West Approach Slab with 16 SF with width of 0.012. See photo							
CS 2 transverse cracking on WB I-94 West Approach slab of 6 SF and West outer slab of 24 SF, both with width of 0.030. See photos.							
331	Reinforced Concrete Bridge Railing	LF	4501	4057	444	0	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1130	Cracking (RC and Other)	LF	1003	562	441	0	0
(331)							
8/11/2020 - Majority of cracks sealed in the WB and EB Outside Barrier and all racks in the PL Barriers are unsealed.							
(331-1080)							
8/11/2020 - Spalling on North concrete wall barrier at EB I-94 Pier 2 Expansion Joint with 1 LF West of joint and 1 LF East of joint.							



[illegible]

### Inspection Comments

Bridge was painted in 2016. All metal surfaces that make up superstructure were sandblasted to bare metal and painted. Jake Mertz was the inspector on this construction project and inspected the sandblasting and painting. Jake found some holes in the web of the longitudinal stringers near the west finger joint during the painting project. Bridge Division was sent pictures and did a inspection of the holes in August 2017. The contractor doing the 2017 repair project welded plates on the web and galvanized the work in October 2017. Bridge was repaired in 2017 as part of I-94 project from RP 156 to 161. All 4 concrete barriers were removed and replaced with new concrete barriers. The deck was removed 1'9" in from each of the 4 sides and was replaced with the barrier. The deck drains were replaced with new ones that dump water out lower than the girders. The concrete around the deck drains was replaced. The deck and approach slabs had spall repairs completed as part of the repair project. west end fence on slope protection has 2 holes cut in fence, - 5/13/2019

8/10/2020 - Some Buckling of West Slope protection west of Girder 3. Loose conduit hanging in Span 6 and 7. Loose Conduit along East Abutment due to broken and rusting of brackets. Conduit is rusting. Some Volunteer Tree growth along SE Wing and both sides of East Slope Protection.

8/11/2020 - Spalling with exposed rebar to NE Corner of Barrier off of East Approach Panel. Rusting to various drains near the spout.

8/12/2020 - Pier 2 and Pier 6 Drain Systems filling up with sediment and debris. WB and EB DL's with sediment and aggregate along Gutter Line. Some Honeycombing under Deck in Span 4 east of Diaphragm 4 WB I-94. Chain Drag Survey Completed in 2018 by the Bismarck District indicates 9.9% Delamination in the WB DL and PL and 3.1% in the EB DL. EB PL was not chained.

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### Alert Code 1

8/10/2020 - I-94 WB and EB East Abutment with moderate cracking to Bearing Pedestals 1-2 due to East Spans pulling on Fixed Bearings. Bearing 1 with separation of 5/8" from bridge seat. I-94 WB at West Abutment Pedestal 1, and I-94 EB at West Abutment Pedestal 2 with cracking and some delamination due to observed pulling of the bearings from Girders. Chain Drag Survey completed by the Bismarck in 2018 Indicated 9.9% Delamination in the WB DL and PL. Chain Drag in the EB DL indicated 3.1%.

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### Alert Code 2

8/11/2020 - I-94 WB Pier 2 Expansion Joint Header Spalling across with separation along the West side of the WB SL up to 1 1/2" from Joint Plate to the patch. Patches deteriorating across joint. Joint Opening 1/2" at 78 Degrees F, Various areas of Debris Impaction restricting movement. Damage to some tops of fingers with weld cuts or missing pieces. I-94 WB Pier 6 Expansion Joint Header Spalling across Pier 6 WB DL. Debris Impaction to various areas across joint. Some damage to top portions of fingers. Joint Tight at 78 Degrees F.

8/17/2020 - Section Loss along EB I-94 Girder 2 south Web along toe to bottom flange. Areas are various and throughout Girder 2. Areas of Section Loss to South Web above Longitudinal Stiffeners throughout most spans. Two Indents in-between Diaphragms 8 and 9 of Girder 2 in Span 3 South Facia with areas 6" by 5/8" D and 1' x 5/8" D



WB span 2 diaphragm 2 girder 1 L1 transverse stiffener distorting 3/4" in 9" (DD)



WB span 2 cross brace rods between diaphragm 1&2 (DD)





WB girder 2 span 2 diaphragm 1 gusset plate deterioration original 0.42" And measured 0.12" (EE)



WB girder 2 weB pier 2 deterioration

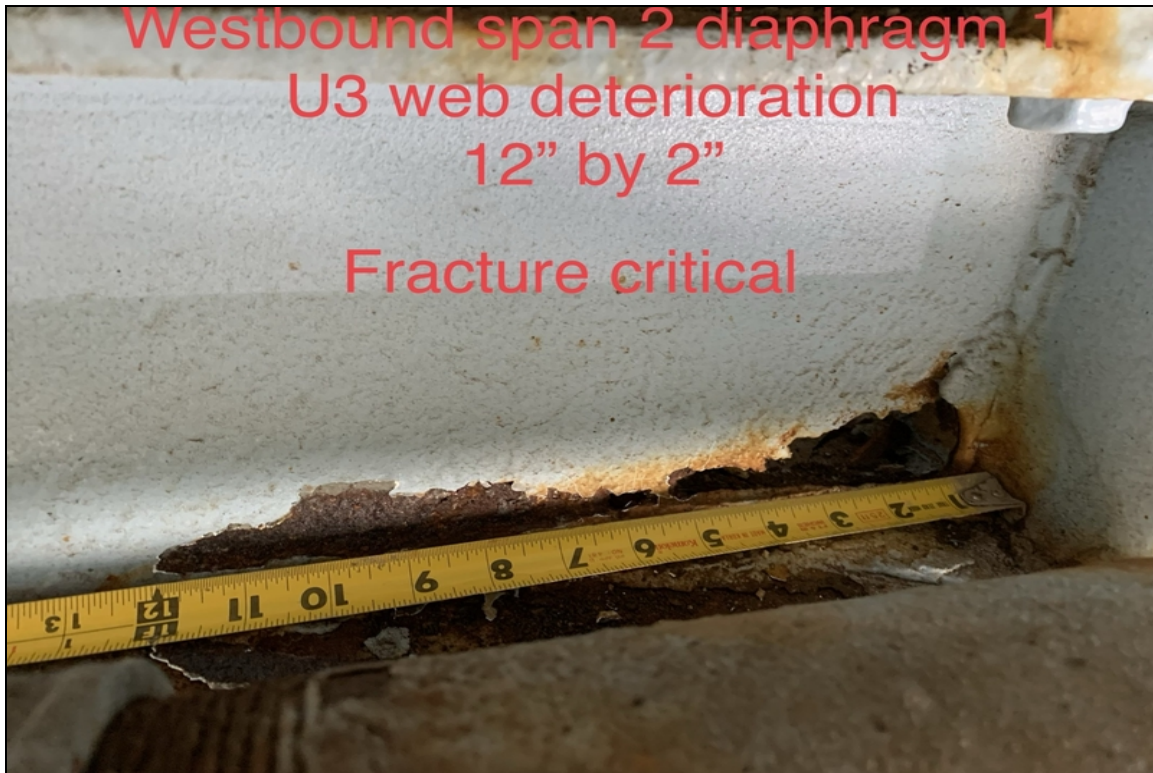


WB span 2 dia 1 U3 web deterioration fracture critical member



WB span 2 dia 1 U3 web deterioration fracture critical member





WB span 2 dia 1 U3 web deterioration 12"x2" fracture critical member



WB span 2 dia 1 u3 web deterioration not fracture critical member





WB span 2 dia 1 L1 gusset plate section loss original 0.42/ measured 0.22 girder 1 (FF)

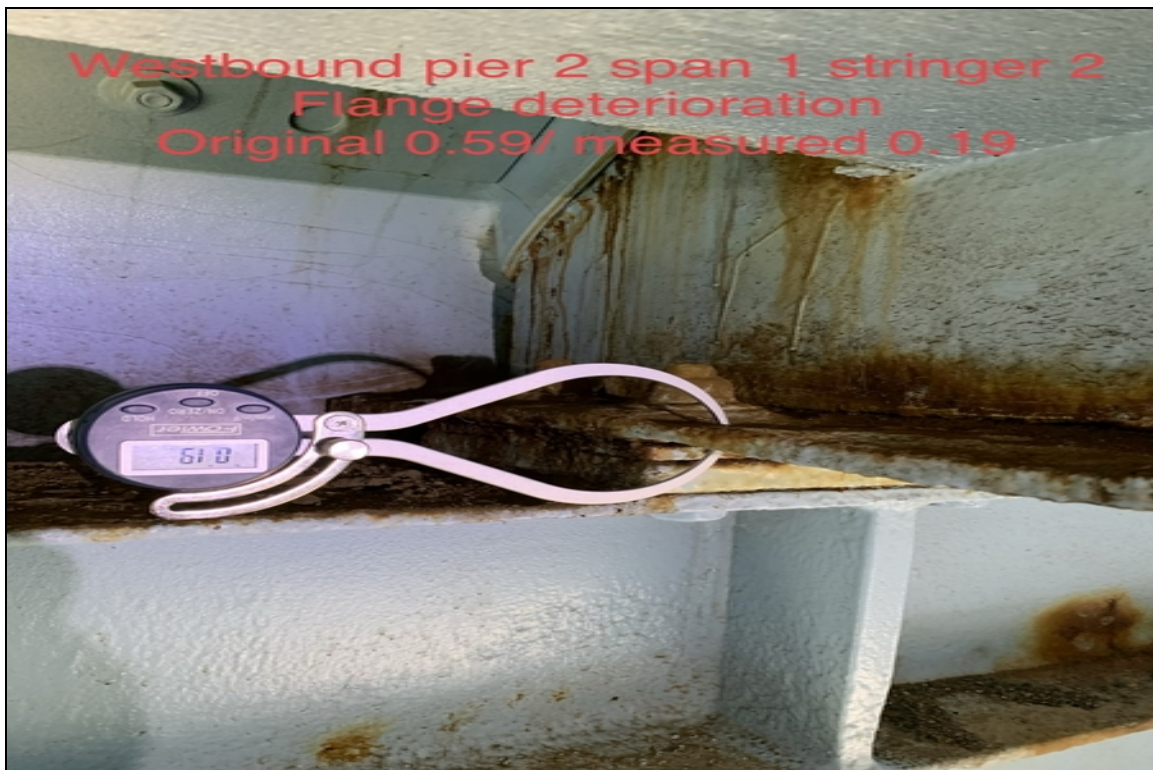


WB girder 2 span 2 Web deterioration pier 2





WB girder 1 span 1 Pier 2 Flange and web distortion



WB pier 2 span 1 stringer 2 flange deterioration original 0.59/ measured 0.19



WB pier 2 span 1 stringer 2 flange deterioration original 0.59/ measured 0.19



Looking north





Looking west



River road looking south





Looking south



Looking east



EB span 5 dia 3 non fracture critical member U2 to U3 mid member bent downward 3/8" in 8" east face



River road looking north





EB span 5 girder 2 splice plate between dia 3&4 south face



EB span 6 between dia 5&6 south tension rod bottom nut loose looking west (cc)



EB span 5 dia 9 stringer 2 above U3 connection (ee) NW face



EB span5 dia 9 L1 gusset plate looking NE





EB span 5 dia 9 L1 gusset plate girder 2 north face



EB pier 6 west face cap cracks

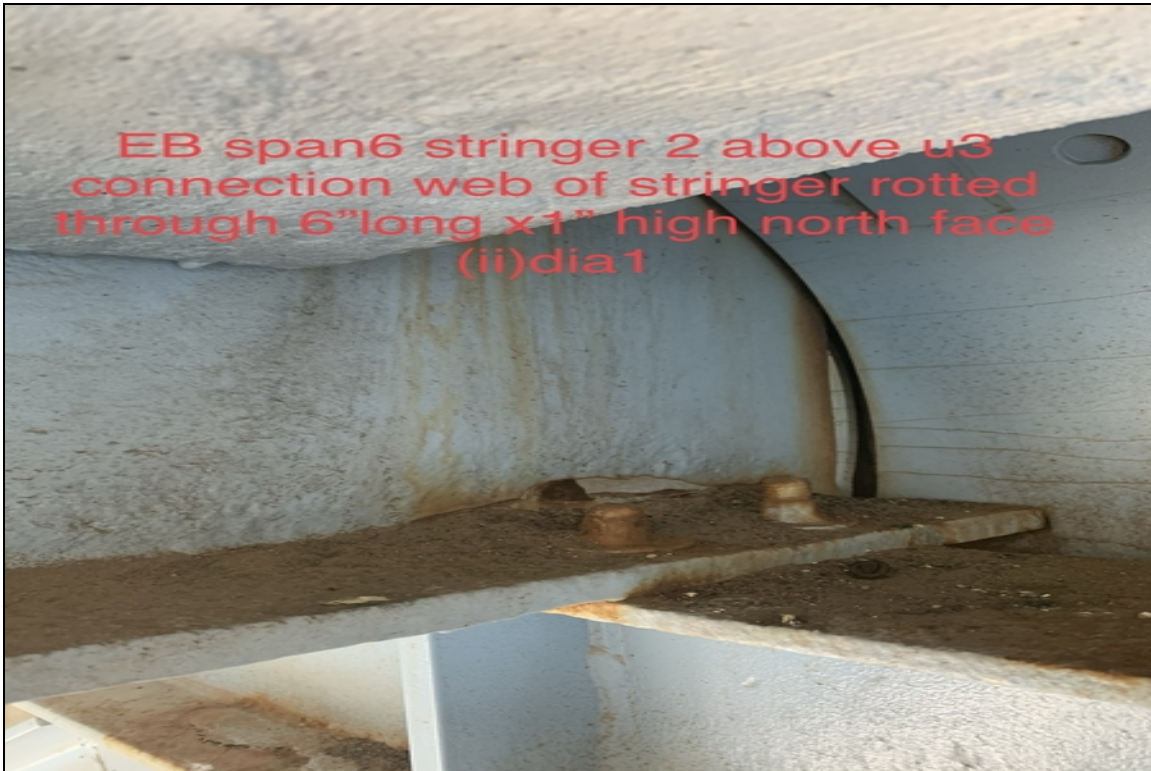


EB pier 6 south end cap cracks

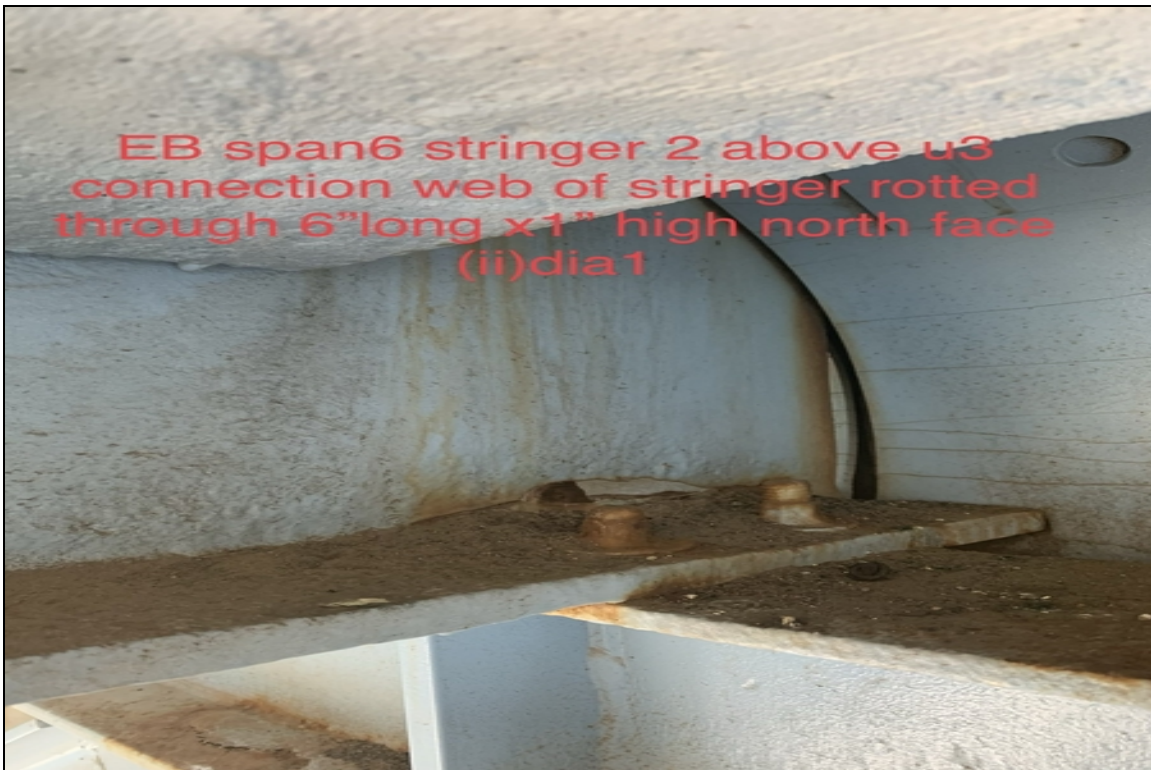


EB pier 6 girder separation of 3/8" bottom flange between girder 2 south bearings north face





EB span 6 stringer 2 above U3 connection web of stringer rotted through 6" long x 1" high, north face (ii)



EB span 6 stringer 2 above U3 connection web of stringer rotted through 6" long x 1" high, north face (ii)





EB span 5 & 6 girder separation @ girder 1 Between both north bearings



EB span 6 girder 2 splice plate rust bulging south face



EB span 6 girder 2 splice plate 2.68" thick original thickness is measure 1.43"



EB span 6 girder 2 splice plate original thickness 1.43"

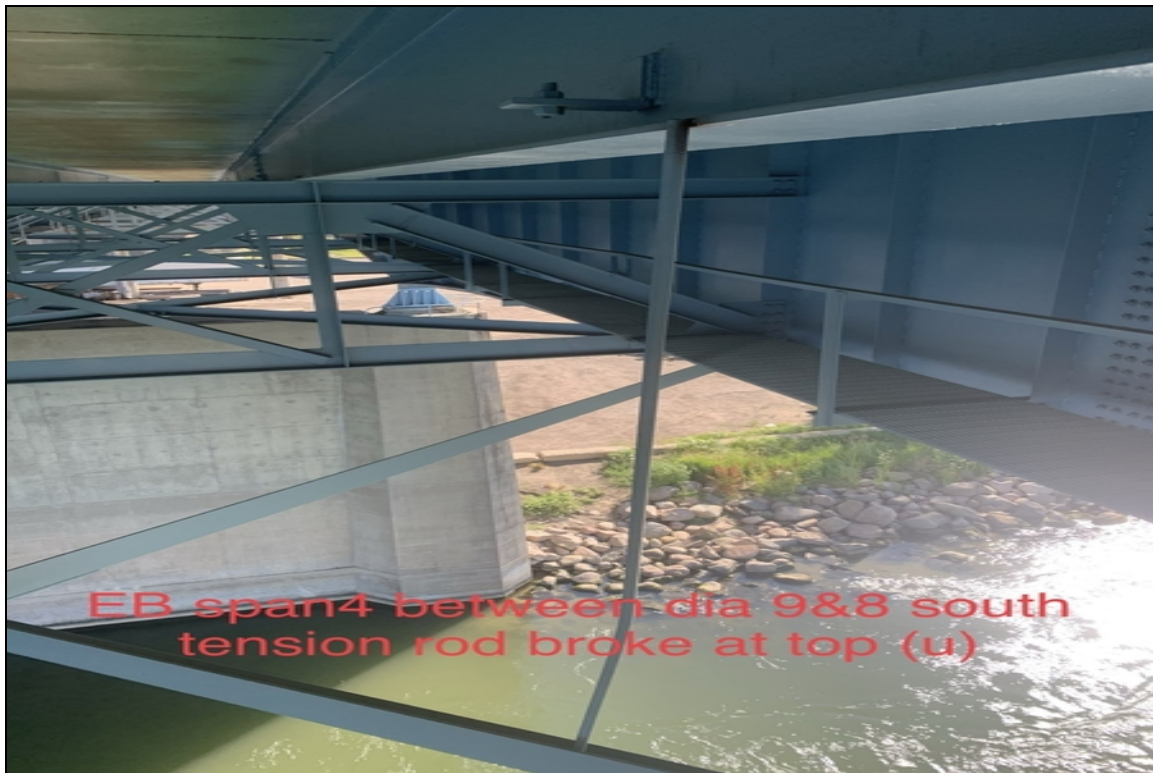




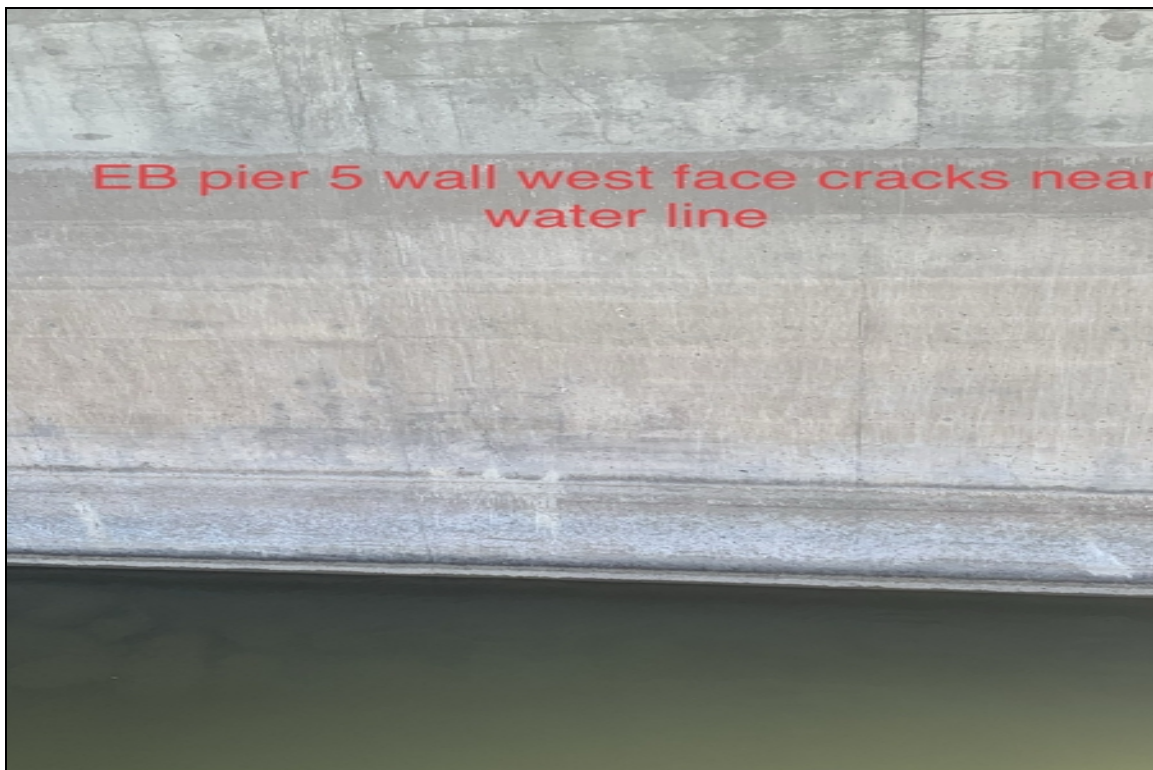
EB span 4 between dia 2&3 underside deck map cracking



EB span4 dia 3 Spall above u2 6"x6"



EB span 4 between dia 9&8 south tension rod broke at top west face (U)

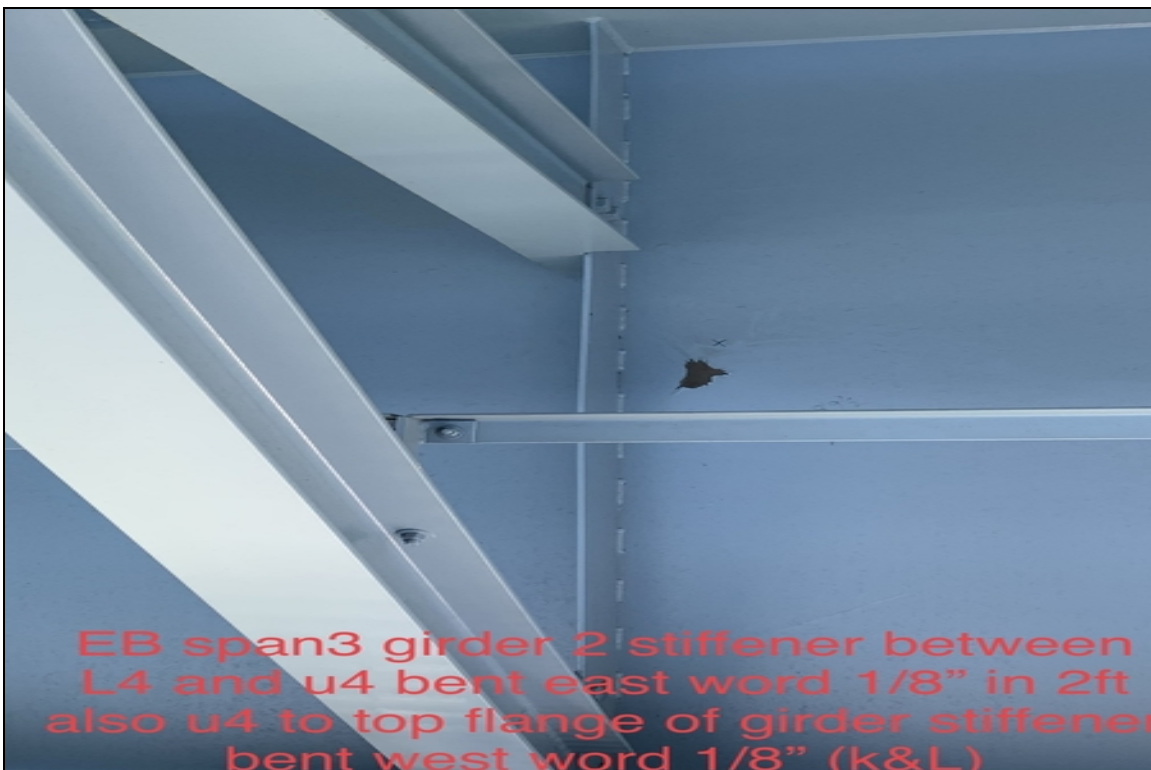


EB pier 5 wall west face cracks near water line





Facing North. Vertical Cracking to Pier 5 South Column.



EB span 3 girder 2 stiffener between L4 and U4 bent east word 1/8" in 2 ft also U4 to top flange of girder2 stiffener bent west word 1/8" (K&L)





EB span 3 girder 2 inline with dia 8, 3.3ft down from top flange dent inward 5/8" (M)



EB spa N3 girder 2, 8ft west from east field splice 5/8" deflection inward (N)



EB pier 4 south end cap spalls and cracks



Looking east between girder 2&1



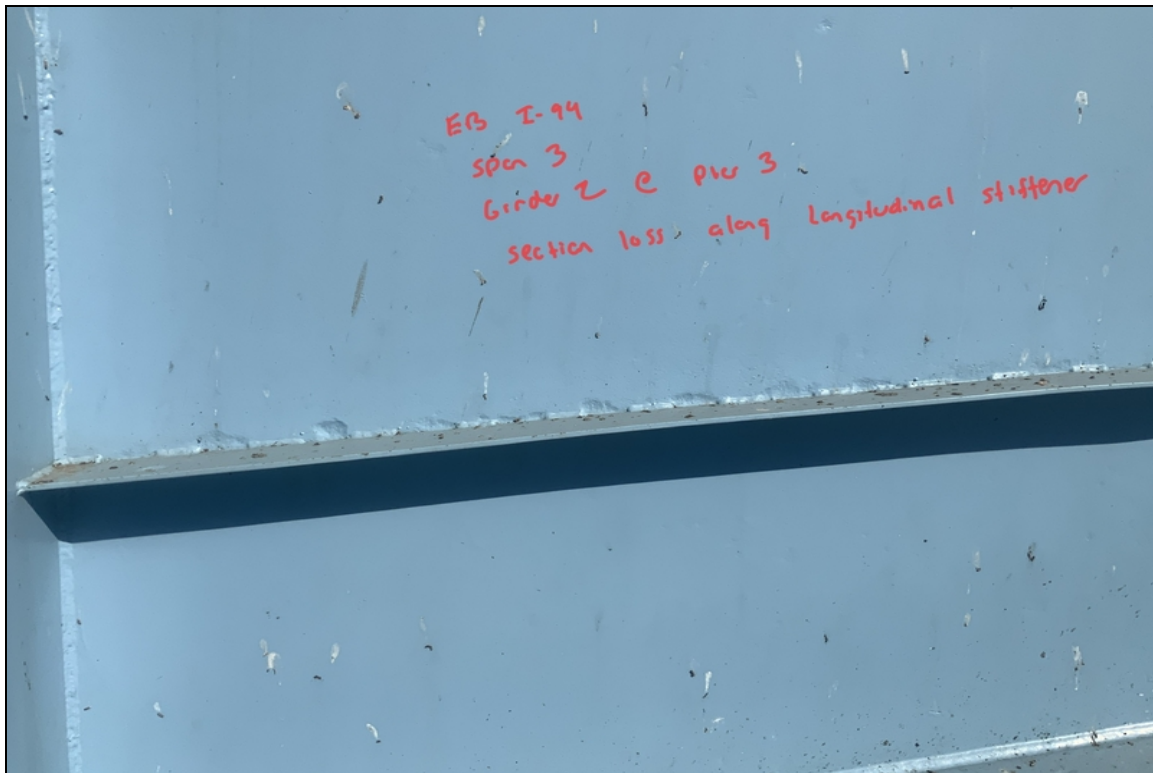


Looking west between girder 1&2



Facing NE. Rusting along baseplate to EB I-94 Bearing 1 at Pier 3.





Facing North. Section Loss to EB I-94 Girder 2 South Web above Longitudinal Stiffener.



Facing NE. Deterioration of Grout Seal around Bearing 2 WB I-94 and Bearing 1 EB I-94.



EB span 1 dia 5 girder 1 flange above north rocker .21" thickness (A)



EB span 1 dia5 girder 1 crack in web above bottom flange (A)

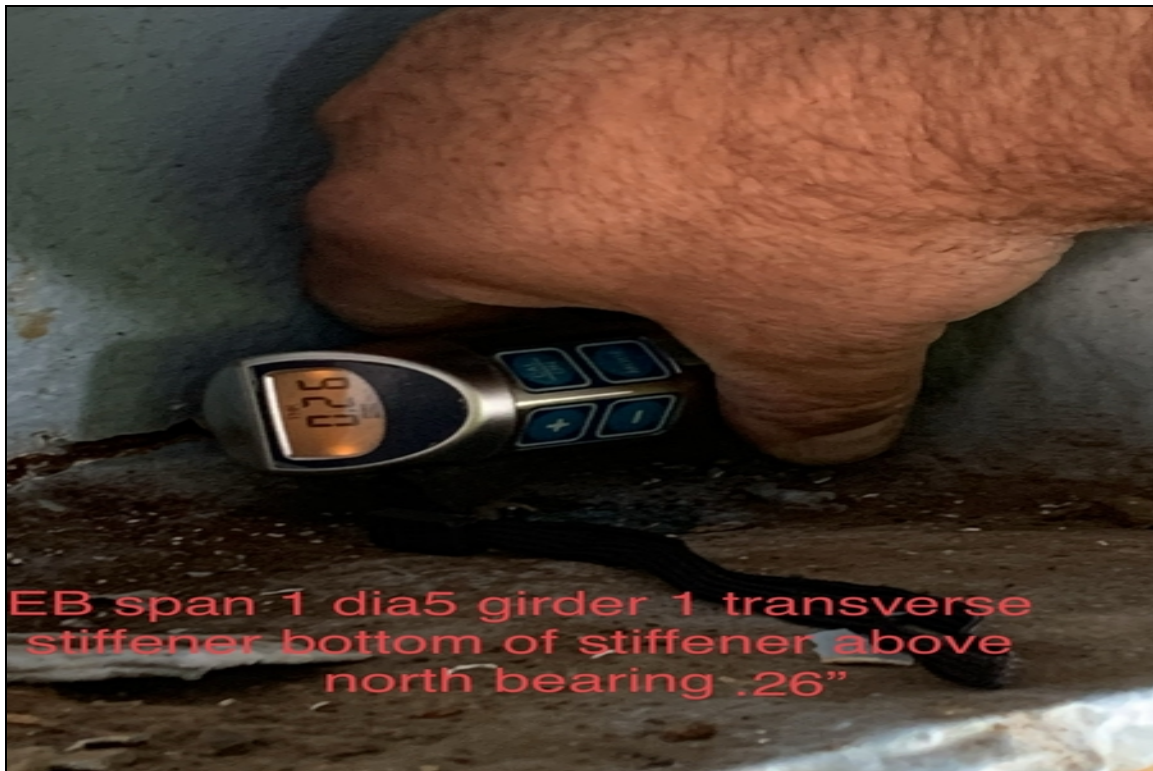




EB span 1 dia 5 girder 1 crack .030 gage was able to slide in crack (A)



EB span 1 dia 5 girder 1 crack in web 6" in length over north bearing (A)

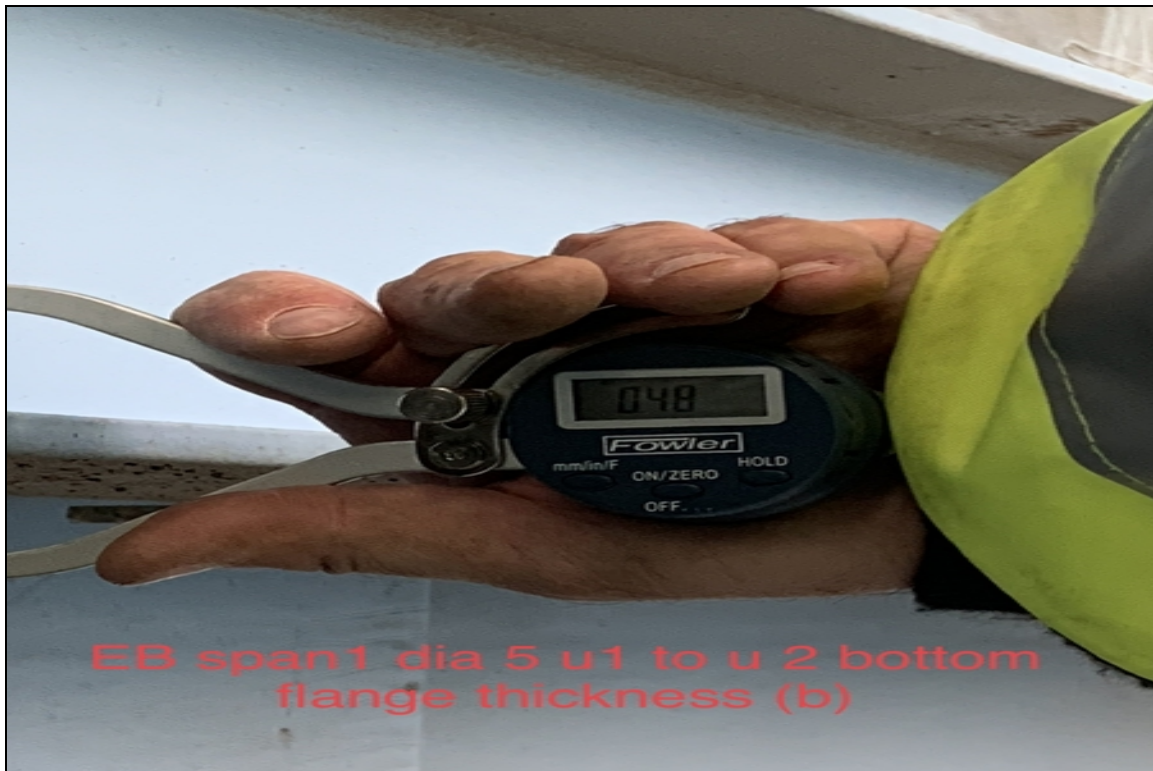


EB span 1 dia 5 girder 1 transverse stiffener, thickness check at the bottom of stiffener above north bearing .26" thickness (A)

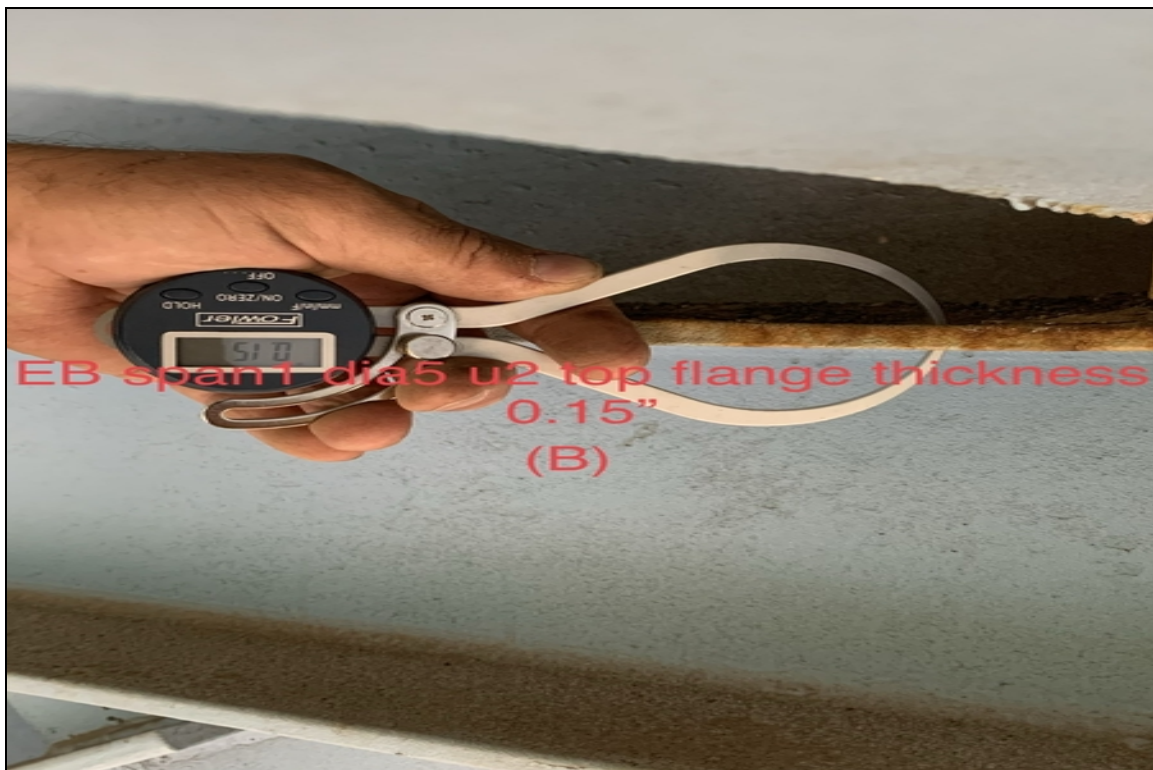


EB span 1 dia 5 girder 1 transverse stiffener thickness of .82" above north bear

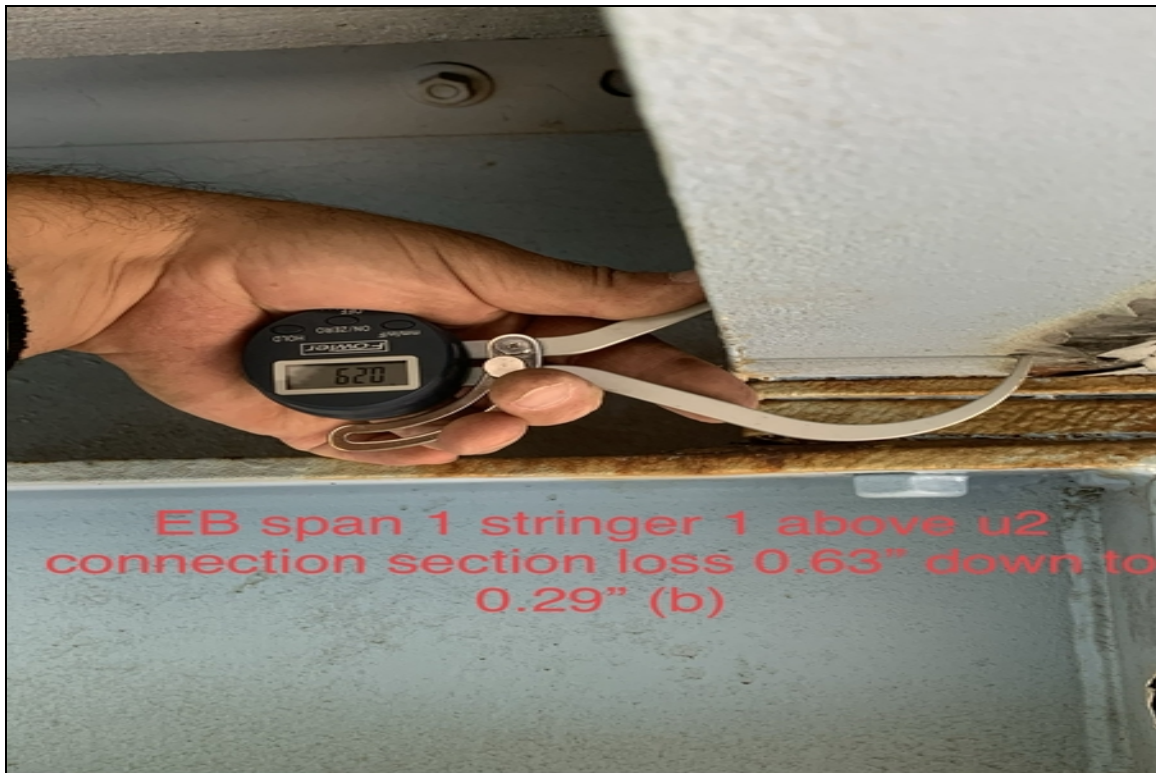




EB span 1 dia 5 U1 to U2 bottom flange thickness.48" (B)



EB span 1 dia 5 U2 top flange thickness .15" (B)



EB span 1 stringer 1 above U2 connection section loss .63" down to .29" (B)



EB span 1 dia 5 stinger 1 web repair (B)





EB span 1 dia 5 stinger 1 web repair (B)



EB span 1 dia 5 top flange at U2 connection north side stringer 1. 4" of section loss long 0.48" down to 0.15" on top flange



EB span 1 dia 5 stringer 2 above U3 connection flange on stringer thickness 0.62" down to 0.41" (C)



EB span 1 dia 5 stringer 2 above U3 connection flange on stringer thickness 0.62" down to 0.41" (C)





EB span 1 girder 2 approx 2ft west of dia 5 south rocker distortion inward (D)

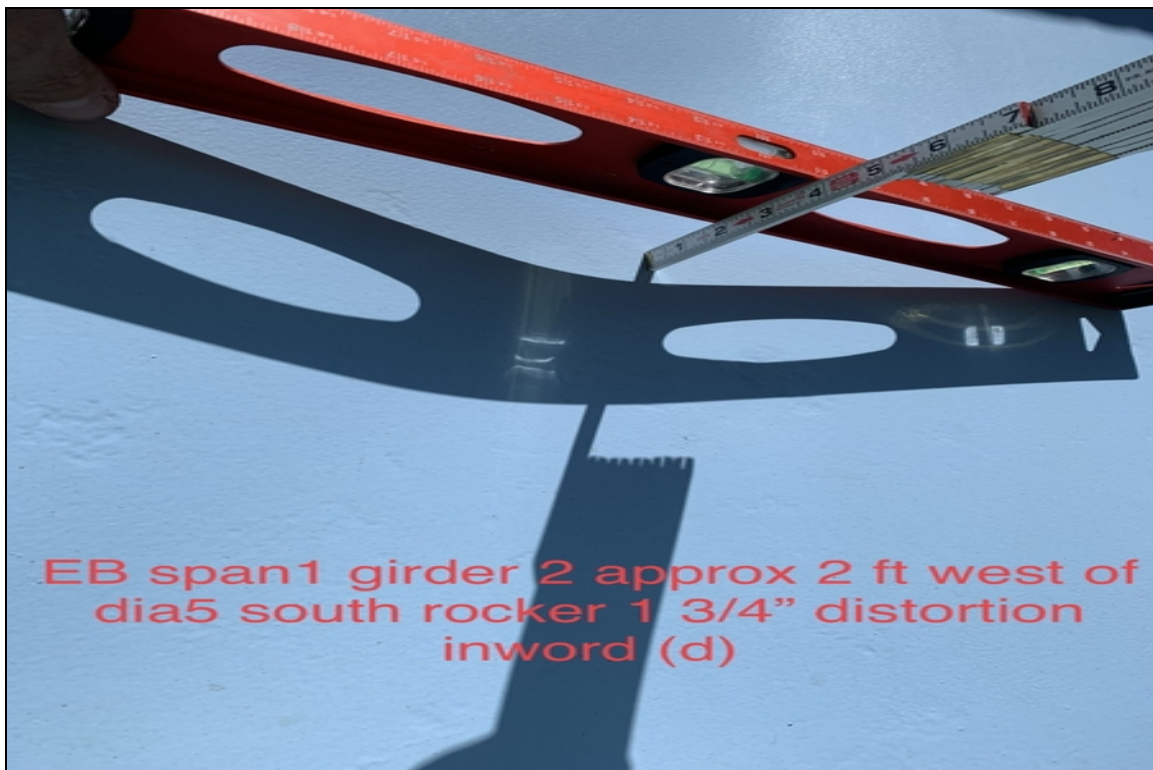


EB span 1 girder 2 north flange bent downward 2" (D)



EB span 1 girder 2 south flange  
distortion upward 2 1/4" west of dia 5  
south rocker (d)

EB span 1 girder 2 south flange distortion upward 2 1/4" west of dia 5 south rocker (D)



EB span 1 girder 2 approx 2 ft west of  
dia 5 south rocker 1 3/4" distortion  
inward (d)

EB span 1 girder 2 approx 2ft west of dia 5 south rocker 1 3/4" distortion inward (D)





EB spa N1 dia 5 girder 2 distortion approx 2ft west of south rocker 1 3/4" pushing inward (D)



EB girder 2 span 1 dia 5 girder distortion

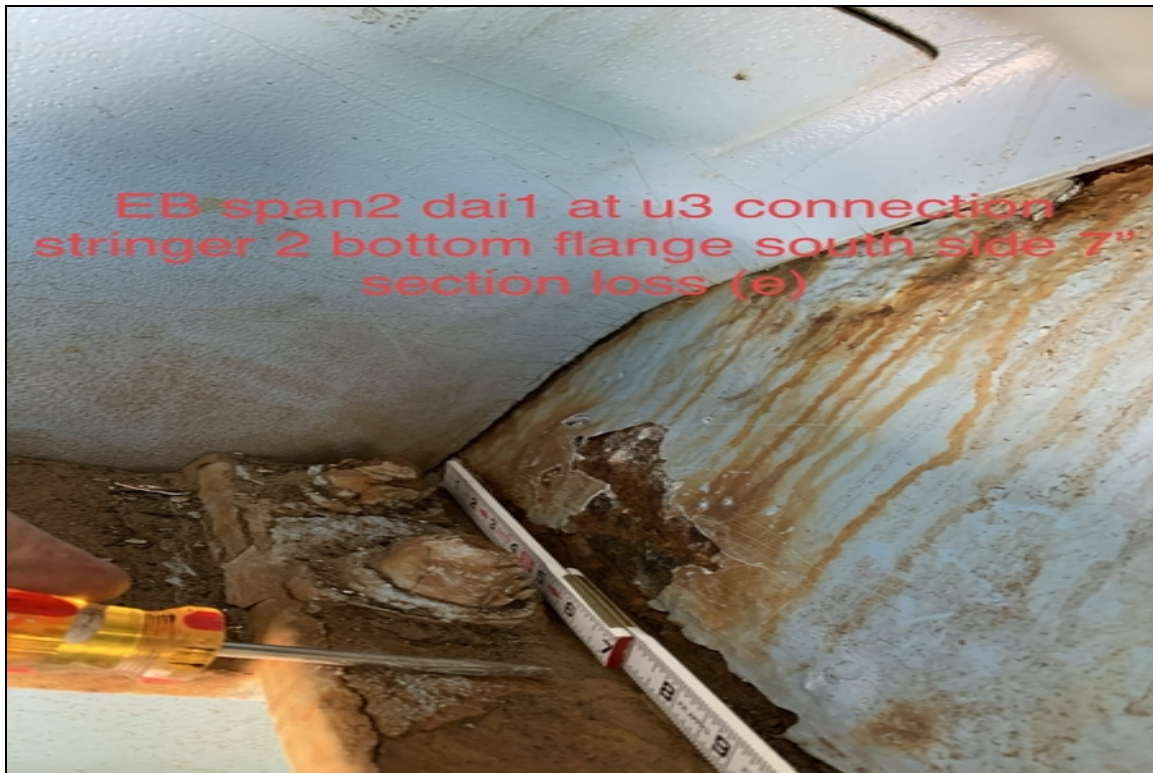


EB west finger joint south end looking north into joint



EB west finger joint end under barrier looking north





EB spa n2 dia 1 at U3 connection stringer 2, bottom flange south side 7" of section loss(E)



EB span2 dia 1 girder 1 web and flange L1 connection and above north bearing, web on girder rotted through



EB span 2 dia 1 girder 1 web and flange connection above north bearing 6" to rotted hole from transvers stiffener



EB span 2 L1 gusset plate dia 1  
25" (g)

EB span 2 L1 gusset plate dia 1 0.25" thickness





EB span 2 L1 gusset plate dia



Facing SE. Delamination to SE Concrete Barrier to EB DL Approach.





Facing South. Spalling along lower portion of South Barrier at Pier 2 Expansion Joint.



Facing East and Downward. General View of Porable Joint Seal to EB DL Deck Extension.





Facing North. General View of Pier 2 Expansion Joint.



Facing East and downward. Header Patched areas along Pier 2 Expansion Joint EB DL.





Facing East and Downward. Header Spalling to EB DL near CL across Pier 2 Expansion Joint.



Facing North and Downward. Header Patched Area to EB PL at Pier 2 Expansion Joint.





Facing South and Downward. Debris Impaction to Pier 2 along EB DL South Gutter Line.



Facing North and Downward. Pier 2 Expansion Joint open 3/4" at 73 Degrees F.





Facing North and Downward. General View of Pier 6 Expansion Joint EB I-94.



Facing East and Downward. Header Patched areas along EB DL at Pier 6.





Facing North and Downward. Header Patched areas along Pier 6 Expansion Joint in EB PL.



Facing East and Downward. Header Spalling along Pier 6 Expansion joint EB DL.





Facing South and Downward. Debris Impaction to EB L Deck Extension Gutter Line.



Facing North and Downward. Pier 6 Expansion Joint opening of 1/2" at 73 Degrees F.





Facing North. EB I-94 East Approach And Outer Approach Transverse joint with no sealant.



Facing North. EB Approach and Outer Approach Transverse Joint with spalling across PCC Pavement causing Impaction to movement. Majority filled in with HMA or Debris.





Facing North. EB I-94 East End Bridge Joint. Seal Joint Failure.

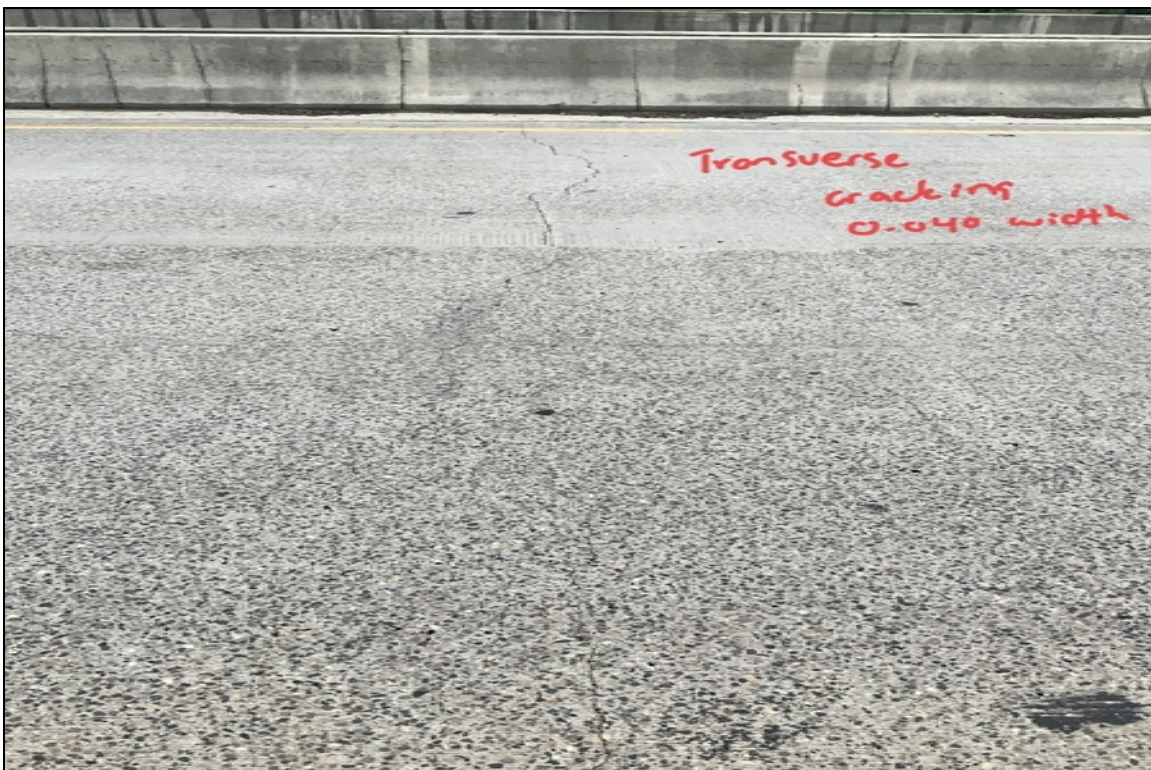


Facing North and Downward. EB PL Bridge Joint with seal damage causing failure of adhesion and debris filtering in.





Facing North and Downward. EB I-94 West End Bridge Joint with Seal Damage



Facing North. Transverse crack across EB DL/PL in Span 2.





WB span 2 diaphragm 1 u3 connection upper chord rotted thru Fracture critical member and also 2 holes on the non fracture critical member



WB span 2 diaphragm 1 at u3 connection rotted web





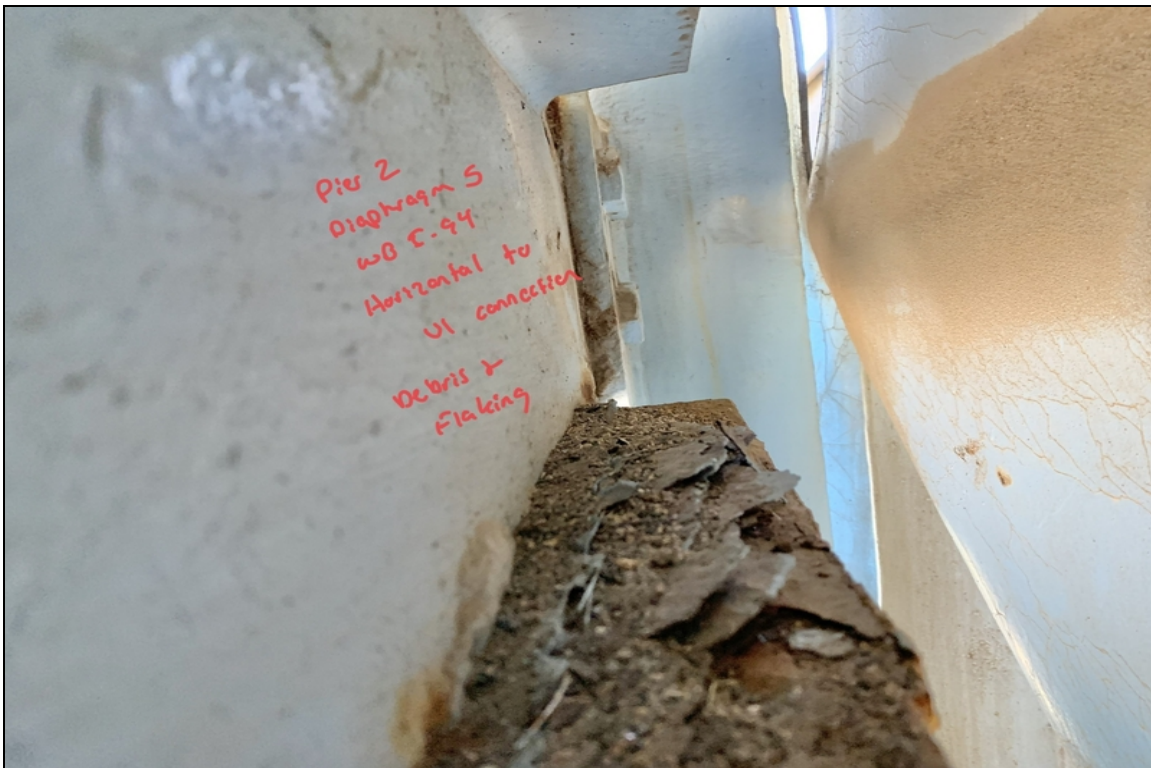
WB span 2 diaphragm 1 u3 connection fracture critical member rotted web



Facing North and Downward. General View of Pier 6 drainage system with sediment and debris buildup restricting flow.



Facing North. WB I-94 Pier 2 Diaphragm 5 U1-U2 Horizontal with pack rust and peeling of coating and steel to bottom flange near U1-L1.



Facing North. WB I-94 Pier 2 Diaphragm 5 U1-U2 Horizontal general view with pack rust and peeling of coating and steel to bottom flange near U1-L1.





Facing SW. Vertical Cracking to EB I-94 Bearing 2 at West Abutment.



Facing North. Various cracking to EB I-94 Bearing 1 at East Abutment.





Facing NE and Downward. Various Cracking to EB I-94 Bearing 2 at East Abutment.



Facing NE and Downward. Various Cracking to EB I-94 Bearing 2 at East Abutment.





Facing SW. General View of East Slope Protection.



Facing West and Downward. Damage to top portion of Fingers in the WB DL.





Facing South and Downward. Separation of Patch Material from Joint along West side in the WB DL.



Facing North and Downward. Debris Impactation to Gutter Line of Expansion Joint over Pier 2.





Facing North and Downward. Attempting to show Pier 2 opening between the fingers at 1/2" at 78 Degrees F.



Facing West and Downward. Joint is tight.





Facing South and Downward. Some Debris Impaction throughout Pier 6 Joint.



Facing SW. Spalling with exposed rebar to NE Barrier end.





Facing South. Vertical Cracking to Pier 7 Column 7.



Facing North. Vertical Cracking Pier 6 Column 1.





WB span 5 diaphragm 9 L4 flange .36" thinning thickness (E)



WB pier 6 cap north end East face cracks





Wb pier 6 east face



WB pier 6 north end cap cracks





WB pier 6 drain system debris



WB span 5 under side deck map cracking





Facing NW. Rusting along Baseplate of Bearing 1 at West Abutment.



Facing North. Various cracking to WB I-94 Bearing 1 Bridge Seat Pedestal at West Abutment.





Facing North. Various cracking to WB I-94 Bearing 1 Bridge Seat Pedestal at West Abutment.



Facing West. Vertical Cracking to West Abutment Backwall South of WB I-94 Girder 1.





Facing West. Vertical Cracking to West Abutment Backwall in-between WB I-94 Girder2 1 and EB I-94 Girder 1.



Facing West. Vertical Cracking to West Abutment Backwall in-between WB I-94 Girder2 1 and EB I-94 Girder 1.





Facing SW. General View of East Slope Protection.



Facing North. Various cracking to WB I-94 Bearing 1 Bridge Seat Pedestal.





Facing North. Various cracking to WB I-94 Bearing 2 Bridge Seat Pedestal.



Facing North. Deterioration of EB I-94 Bearing 2 seal.





Facing SE. Spalling to East Abutment near SE Corner where it meets the Wing.



Facing North. Some Buckling of East Slope Protection at top Near Girder 3.





Facing SE. Some Diagonal and Vertical cracking with some seepage and efflorescence along SE Wing.



Facing South and Downward. Blade Damage across East End of Bridge Deck in the WB DL.





Facing South and Downward. Blade Damage across East End of Bridge Deck in the WB PL.



## Maintenance Needs

**Date Reported:** 08/10/2020  
**Priority:** Normal  
**Type of Work:** Remove Debris & Veg from Chnl  
**Status:** Under Review  
**Component:** 8401 - Wings

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## Deficiency Description

Some Volunteer Tree Growth along SE Wing and East Slope Protection. See Photo. 10August2020

## Remarks

Recommendation to remove.

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Facing North. Tree Growth along SE Wing.

**Date Reported:** 08/10/2020  
**Priority:** Normal  
**Type of Work:** Replace Joint Seal (P)  
**Status:** Under Review  
**Component:** 301 - Pourable Joint Seal

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#### Deficiency Description

All Pourable Joint Sealant with seal damage with complete removal of sealant. . See Photos. 10August2020

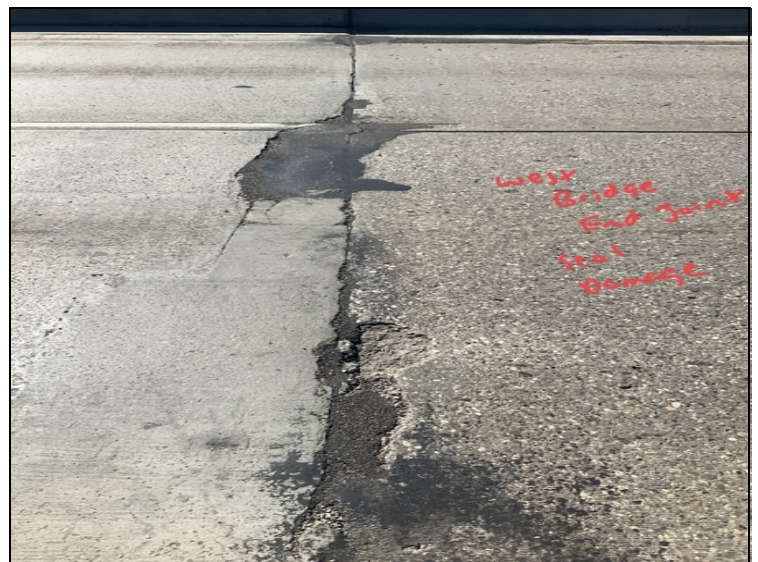
#### Remarks

Recommendation to Clean and reseal joints.

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Facing South and Downward. Seal Damage completely across Approach Panel Joint.



Facing South and Downward. West Bridge End Joint. Seal Damage across.





Facing North and Downward. EB PL Bridge Joint with seal damage causing failure of adhesion and debris filtering in.



Facing North and Downward. EB I-94 West End Bridge Joint with Seal Damage



Facing North and Downward. EB I-94 West Approach and Outer Approach Transverse Joint Sealant Damage.



**Date Reported:** 08/11/2020  
**Priority:** Normal  
**Type of Work:** Remove Graffiti  
**Status:** Under Review  
**Component:** 107 - Steel Open Girder/Beam

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### Deficiency Description

Graffiti applied to North Web of Girder 4 in Spans 6 and 7. See photos. 11August2020

### Remarks

Recommendation to remove graffiti.

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Facing South and Upwards. Graffiti applied to North Facia of EB I-94 Girder 2 in Span 7.



Facing South and Upwards. Graffiti applied to North web of Girder 4 in Span 6 West of Pier 7.

**Date Reported:** 08/11/2020  
**Priority:** Normal  
**Type of Work:** ----- Other -----  
**Status:** Under Review  
**Component:** 12 - Reinforced Concrete Deck

### Deficiency Description

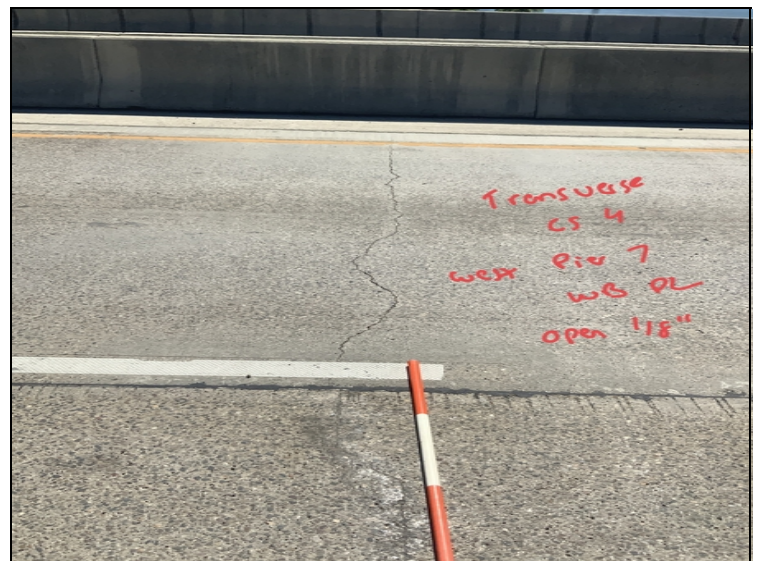
Various Transverse cracks Unsealed in the Wearing Surface and Barrier, Mainly in the WB and EB Passing Lanes with some in the Driving Lanes. 11August2020

### Remarks

Recommendation to Seal Wearing Surface and Barrier Cracks with approved material from Maintenance Manual. See Photos.

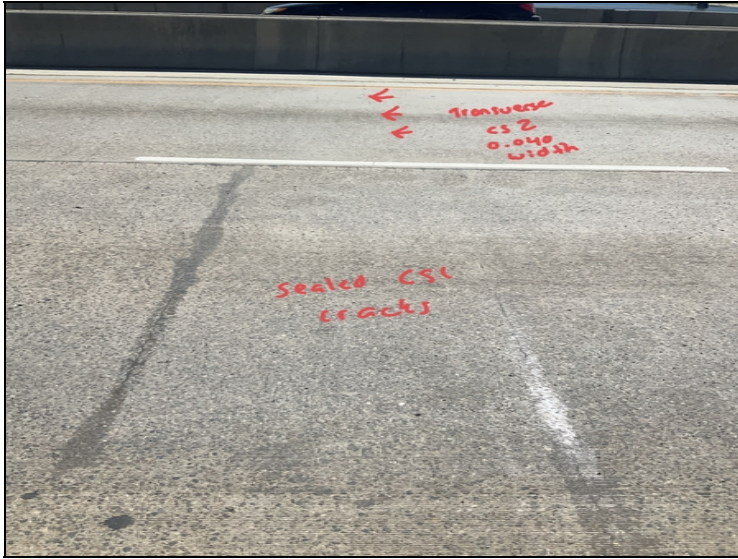


Facing South, WB DL with sealed cracks, WB PL with transverse cracks at Pier 7.

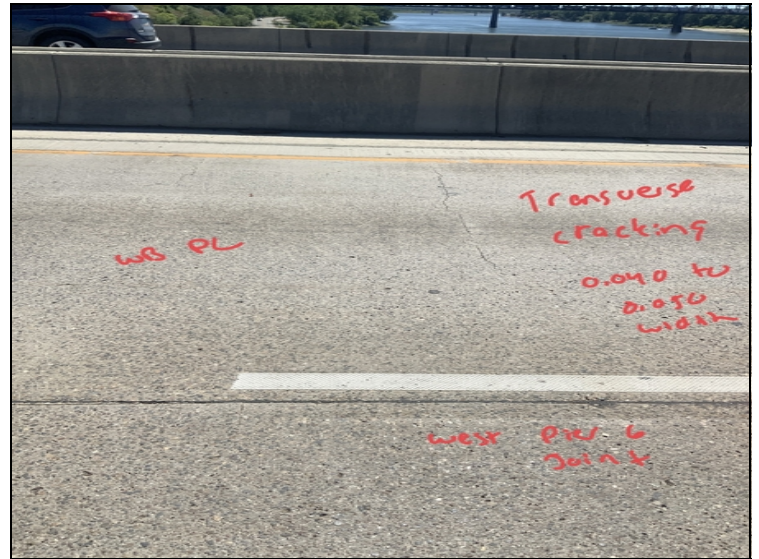


Facing South. CS 4 Transverse cracking with an opening up to 1/8". In the WB PL West of Pier 7.

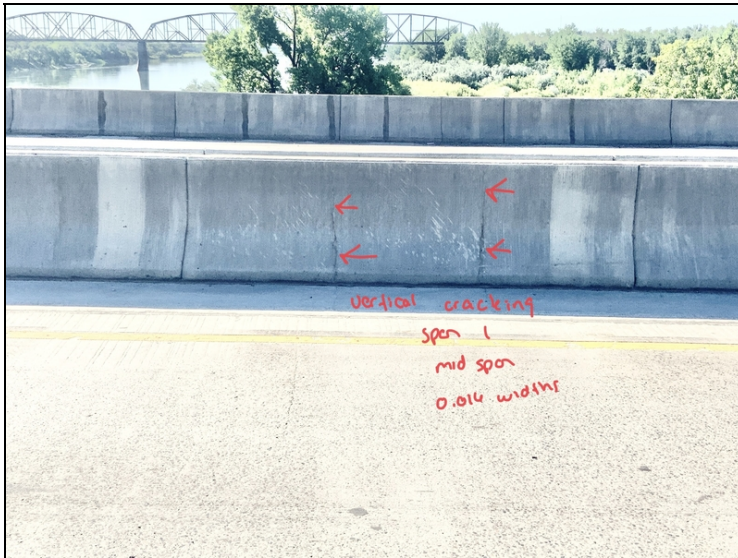




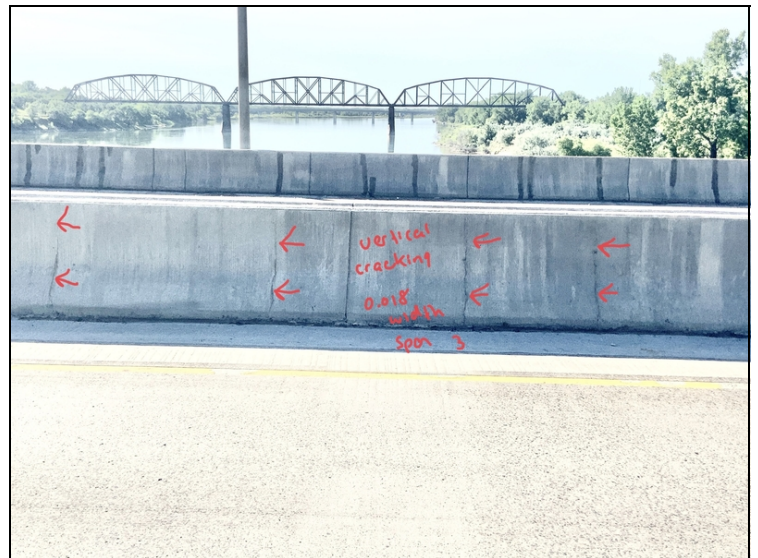
Facing South. WB DL with sealed cracks. WB PL with Transverse cracking near Mid Span of Span 6.



Facing South. Transverse cracking to WB PL West of Pier 6 Finger Joint.

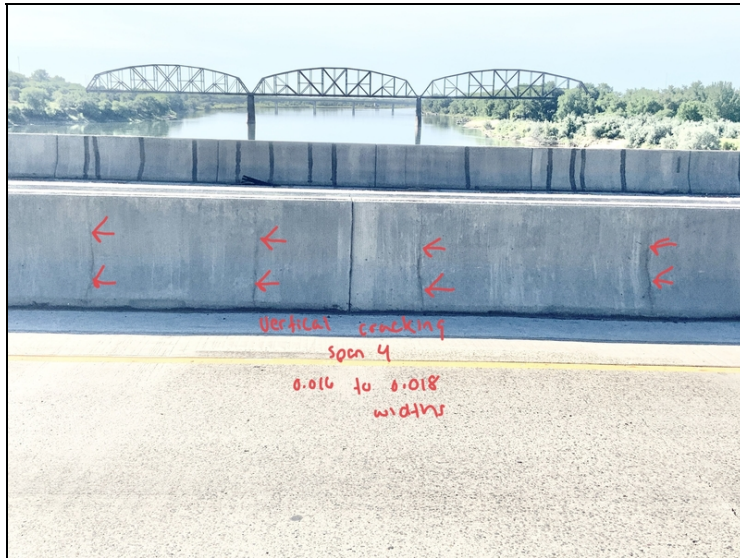


Facing South. Unsealed Vertical Cracks to South Barrier in Span 1.



Facing South. Unsealed Vertical Cracks to South Barrier in Span 3.

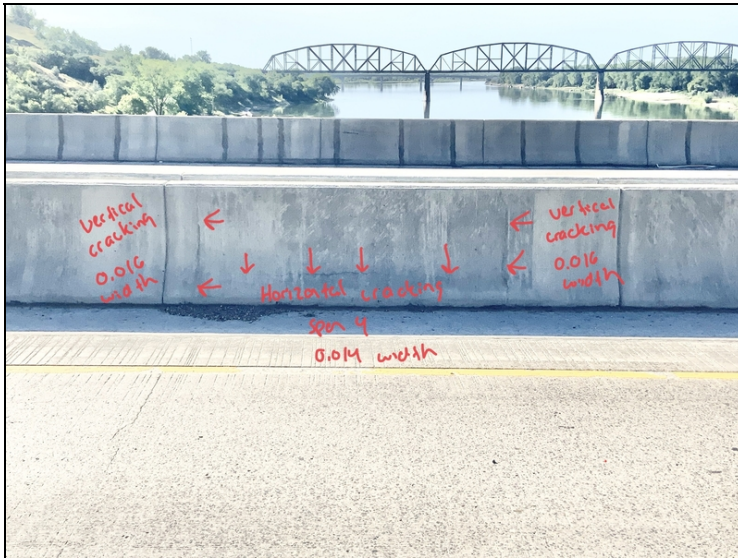




Facing South. Unsealed Vertical Cracks to South Barrier in Span 4.



Facing South. Another View of Unsealed Vertical Cracks to South Barrier in Span 4.



Facing South. Vertical and Horizontal Unsealed Cracks to South Barrier in Span 4.



Facing South. Vertical Unsealed Cracks to South Barrier in Span 6.





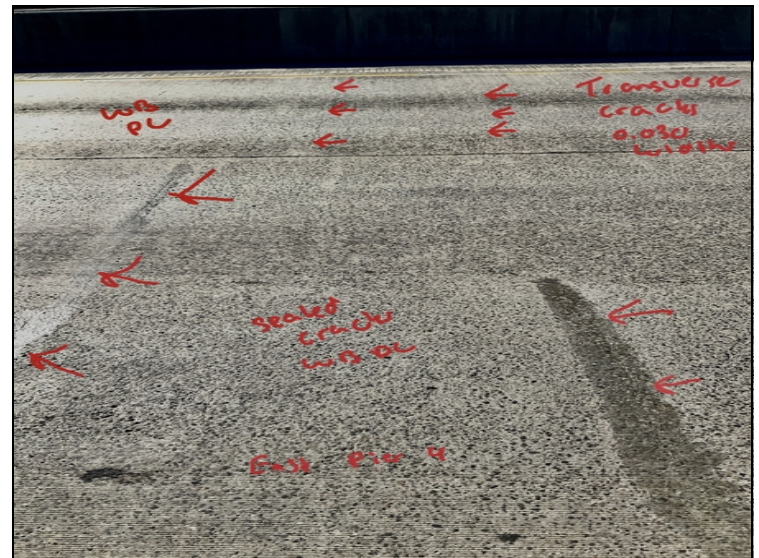
Facing South. Vertical Unsealed cracks to South Barrier in Span 7.



Facing SW. General View of Sealed cracks to WB DL only over Pier 5. WB PL Cracks unsealed.

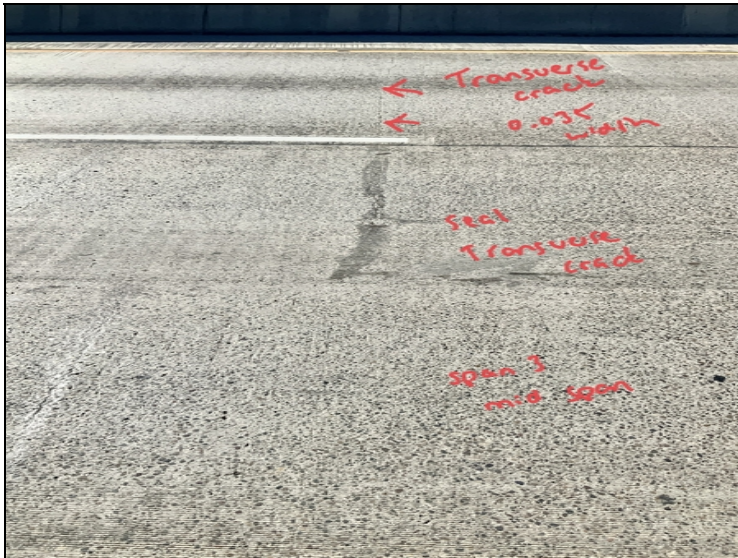


Facing South. Transverse crack sealed in the WB DL and unsealed in the WB PL West of Pier 5

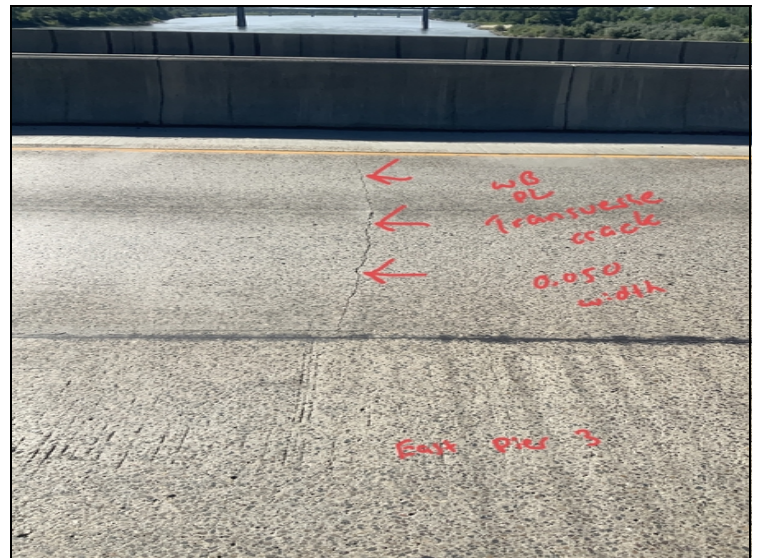


Facing South and downward. WB DL Sealed Cracks and WB PL unsealed cracks East of Pier 4.

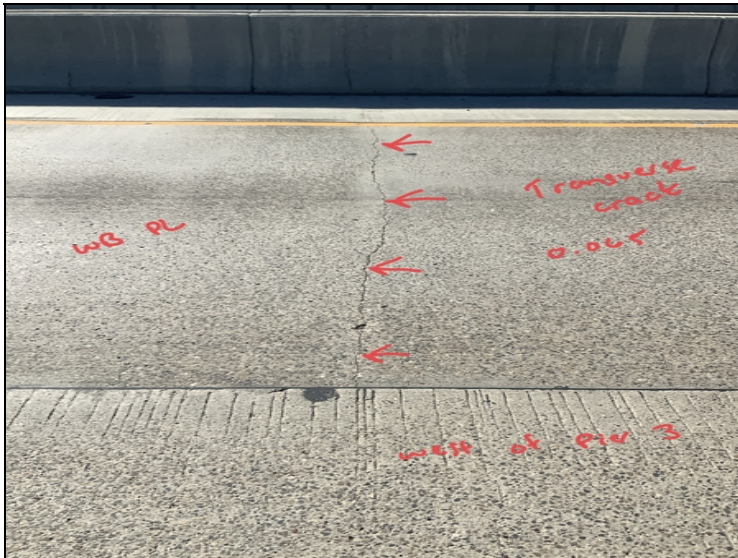




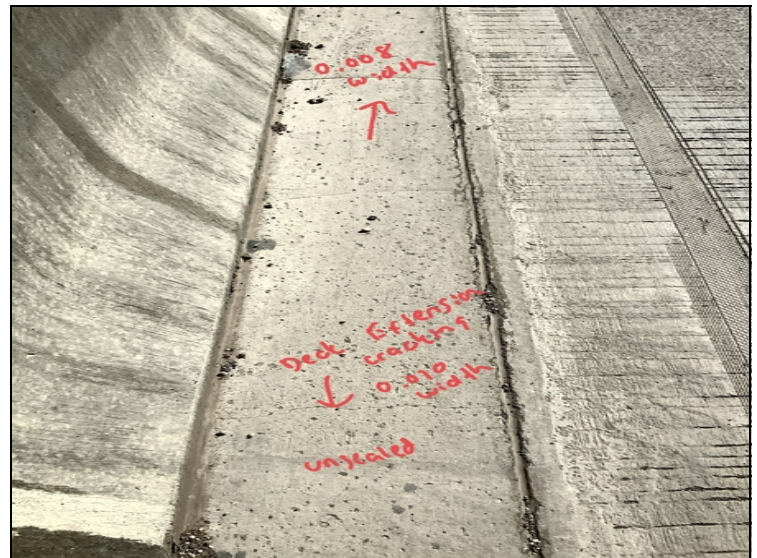
Facing South and Downward. Sealed Cracks to WB DL and unsealed cracks to WB PL in Mid Span of Span 3.



Facing South and Downward. Transverse crack to WB DL unsealed.



Facing South and Downward. Transverse CS 3 Crack Unsealed in WB PL.

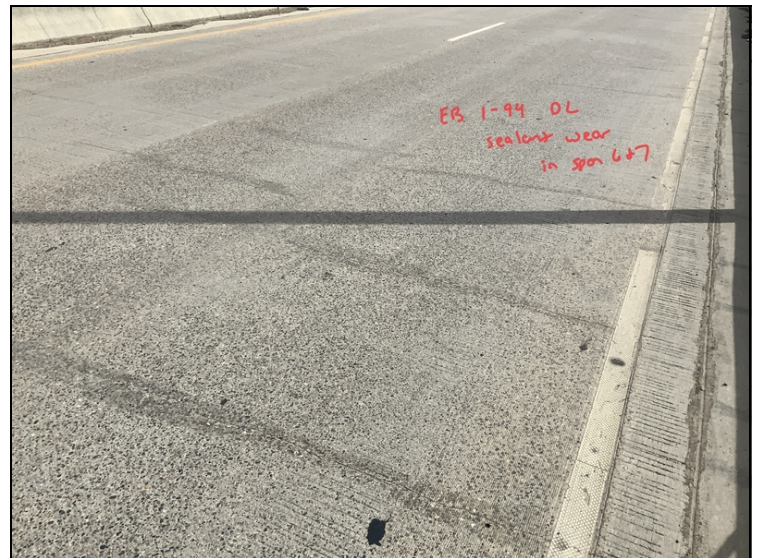


Facing East and Downward. Transverse cracking to North Deck Extension East of Pier 2. Cracks unsealed to various areas along North Deck Extension and no cracks sealed along South Deck Extension.





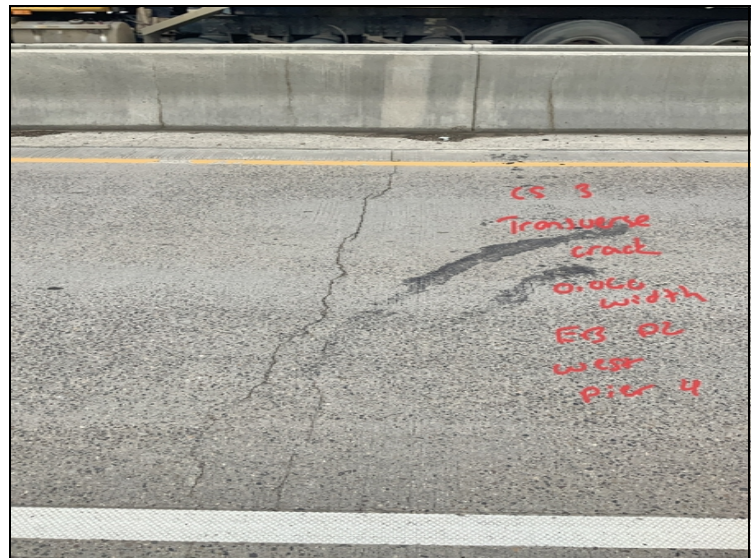
Facing North and Downward. Transverse cracking to EB DL West of Pier 7.



Facing NE and Downward. EB I-94 DL Sealant showing wearing. No sealant to EB PL.

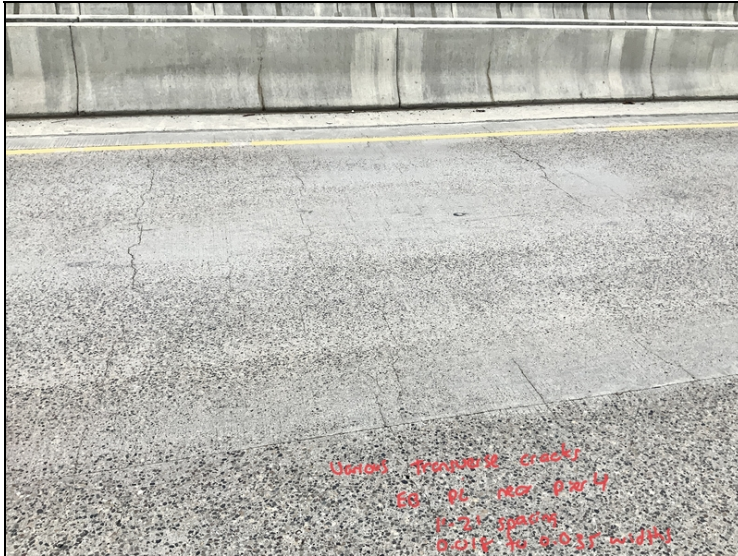


Facing North and Downward. Transverse cracking to EB PL East of Pier 4.

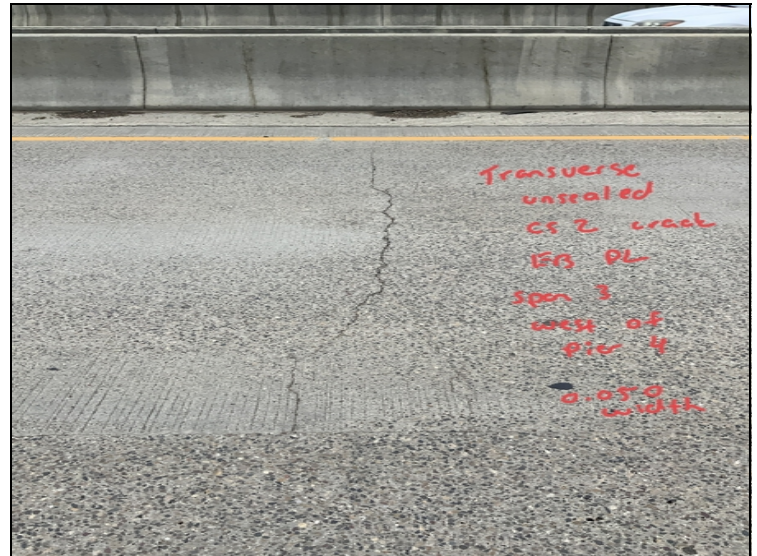


Facing North and Downward. Transverse cracking to EB I-94 PL West of Pier 4.





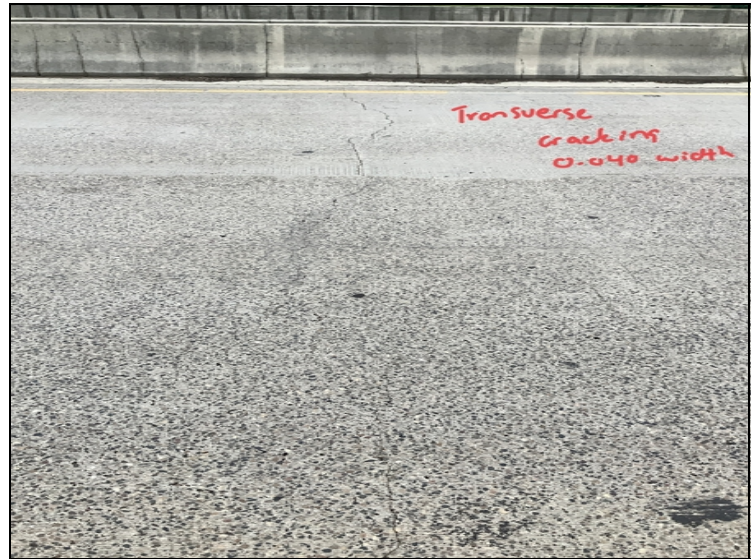
Facing North and Downward. Transverse Cracking to EB I-94 Wearing Surface in the PL near Pier 4.



Facing North and Downward. Moderate Transverse crack across EB I-94 PL West of Pier 4.



Facing NE and Downward. Various Transverse cracks to EB I-94 DL sealed. Some sealant showing wear.



Facing North. Transverse crack across EB DL/PL in Span 2.





Facing NE. General view of Wearing Surface.  
Some DL Cracks sealed. All PL Cracks unsealed.



Facing South. Vertical cracking sealed and  
unsealed to EB DL Bsrrier in Span 7.



Facing South. Various vertical seal and unsealed cracking to EB DL Barrier in Span 4.



Facing South. Various vertical sealed and unsealed cracks to EB DL South Barrier in Span 3.

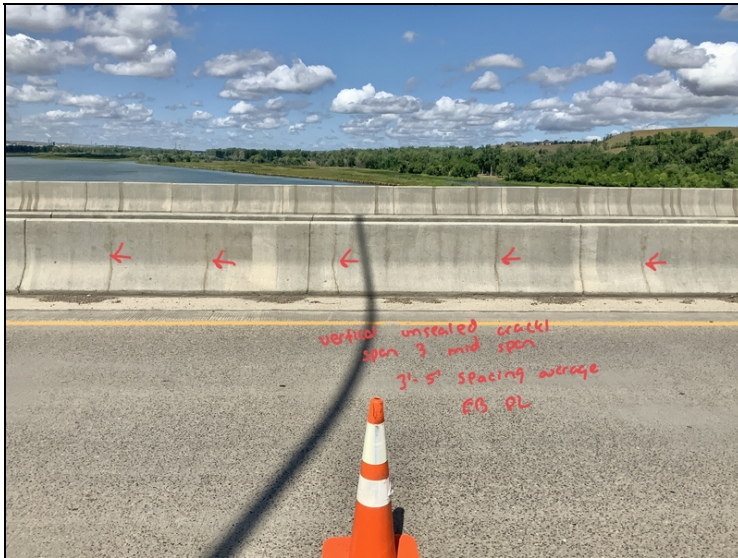




Facing North. Various vertical unsealed cracks to EB PL North Barrier in Span 7.



Facing North. Various unsealed vertical cracks to EB PL North Barrier in Span 5.



Facing North. Various unsealed vertical cracks to  
EB PL North Barrier in Span 3.



**Date Reported:** 08/12/2020  
**Priority:** High  
**Type of Work:** Remove Debris from Drains  
**Status:** Under Review  
**Component:** 234 - Reinforced Concrete Pier Cap

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### Deficiency Description

Pier 2 and Pier 6 Drainage systems filling up with sediment and some vegetation limiting flow to the discharge Pipe. Sediment and Aggregate Buildup along WB and EB DL Gutter Lines. Pier 2 and Pier 6 with debris filling up in both Expansion Joints. See Photos. 12August2020

### Remarks

Recommendation to flush Gutter Lines. Pier 2 and Pier 6 with debris filling up in both Expansion Joints. Recommendation to Flush out the Joints. Recommendation to clean out drainage systems. Sediment and Aggregate Buildup along WB and EB DL Gutter Lines.

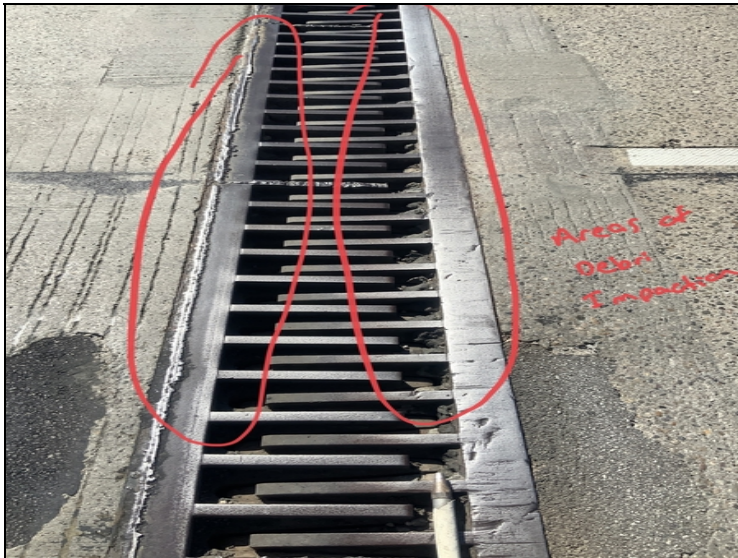
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Facing East and Downward. Sediment and Aggregate Buildup along North Gutter Line of WB 1094.



Facing North and Downward. Debris Impact to Gutter Line of Expansion Joint over Pier 2.



Facing South and Downward. Debris Impaction to various areas of Joint.



Facing North. Debris Impaction along Gutter Line of WB DL at Pier 6 Expansion Joint.





Facing South and Downward. Debris Impaction to South end of Pier 6 Joint Gutter Line of the WB PL.



Facing North and Downward. General View of Pier 6 drainage system with sediment and debris buildup restricting flow.



Facing NW and Downward. Pier 2 Drainage System WB I-94 with Debris and Sediment Buildup in troughs.



Facing West and Downward. Areas of sediment and aggregate buildup along EB DL Deck Extension Gutter Line.